

# **7266**

# **16mm Cine**

# **Processing**

# **Freely you received**

so

# **Freely give**

This book is my way of study. It was not sponsored by any company. I paid for everything. If you found it useful and are a little grateful, please consider making a contribution in return. And if you do use some of the contents, post your results? Facebook, Home movie film lab. My PayPal account is: michael.studiocarter@gmail.com or the same as my email. I used to be an art teacher and worked for a while in a major corporate printing company art department where I learned a lot of book making skills. I'd like to hear from you. Comment on YouTube. Archive dot org has a comment section also.



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# Introduction

I've collected many things to develop cine film with. I was going to start a super memorization study of chemistry vocabulary but got an email from a cine person in the UK asking about Keystone cameras. That set me off. These are some of the things I use.



May 15, 2017. I began using old Tri-X, which was left over from 1999 and later, during 2 years in England. A lot of 7266 was used and it was developed in a German lab. It was time to use it again, only I would develop it myself in my coal cellar in PA. Film tests come first and are named: zero ABC and so on. 0A, 0B, 0C. Note: 0A was deleted as it was made in England. That is another book.

A suggestion was made online for me to: "Do a bracketing test around 100 ASA (3 stops in each direction) and develop 10 minutes @20° in Rodinal 1+50. you probably end up at around 100 ASA." Thanks F.W.

On February 27, 2018 I began compiling reports from Sept 15, 2017, when I started shooting new 16mm 7266 Tri-X and developing it. Jobo 110 reels were used for many tests. But, I did manage to develop some in a 25 foot tank and in a 50 foot tank. Those film tests are named 1A, 1B, ... 2A, 2B...

Rodinal is what I used first, RO9 One Shot, it is sold by Freestyle. It *could* be mixed but it is expensive to buy those chemicals. So, it is easier to buy RO9 and use it pre mixed than mix my own. That was used for a lot of my tests. Other developers were tried. HC-110 is what I use also. Film tests are grouped by the developers that were used: RO9, HC-110, Paranol, D-19, LQR, D-94 & D-95. Films are also grouped by the methods used which were normal or stand.

Tri-X 16mm 7266 black and white reversal film is what I used. That meant I had to reverse it and use bleach and clear. It wasn't that hard to do. I did a lot with Stand developing reversal film. It uses very little chemical. It worked every time I tried it. I was not tied to the developing chair, agitating every 30 seconds for 22 minuets. I could walk away for an hour at a time. I liked that. Pictures looked great. I bought bulk Dichromate, acid, and a clear chemical.

My notes began with Stand developing 7266 1B. I wanted to use fresh film so I could always get the same results. And I had some film to use. I needed things that worked. A film I can control. A developing and printing scheme that was repeatable.

The best way I found to determine correct exposure of reversal was to project it. Project and eyeball it. I had to view the film projected to see the effects and to select those I liked. Projection of a loop of film showed the best exposures. You

have to look at the projection. Look at the projections and select the exposures you like. That is what I learned to do.

After I got results that looked good, I fine tuned it. Were details seen in shadows? How about the light areas? Increase exposure to see details in shadows and decrease development time to see details in light areas.

I did this work using new fresh Kodak film. New Kodak reversal film was needed. The D-94 formula was copied from the internet into my notebook. I didn't know what to use. One roll of 7266 was ordered Sept. 16 just to try. Would it work using RO9 and Dichromate bleach? I didn't know!

While I waited for the film, I developed Foma R100 reg 8mm in RO9 to practice. That worked. Then the 7266 arrived and I wanted to see if RO9 and Dichromate worked on it. That was when I developed 16mm 7266 1A. It worked.

I make 16mm black and white reversal films by stand development in my own darkroom. My Facebook home page, <https://www.facebook.com/michael.studiocarter>, was given my email address in the About section, as well as a link to my YouTube studiocarter1 channel. <https://www.youtube.com/user/studiocarter1>, and to Archive dot Org: <https://archive.org/details/@studiocarter>

I like stand developing because it uses much less chemical. I like Kodak film because they make so many different films in 16mm, and it is sold locally, B&H even provides free shipping. They also make the developer I am using, HC-110, and B&H ships it!

“.. with reversal film, exposure is everything. Overexposure in reversal means low contrast, fine grain, no blacks (and low color saturation with color reversal). Under exposure means higher contrast, higher grain (and high color saturation)...Exposure has the same effect as with Plus-x reversal as UN54 as any other b&w reversal.” from cinematography dot com 66527.  
Many suggestions and comments were used in this study and I am grateful for them.

A playlist on YouTube was made to use with this document:  
<https://www.youtube.com/playlist?list=PLU2eKg3uAYHjokciZyLUBUBceJdnohzPA>



## EXPOSURE INDEXES

Tungsten (3200K) - 160      Daylight - 200<sup>1</sup>

Use these indexes with incident- or reflected-light exposure meters and cameras marked for ISO or ASA speeds or exposure indexes. These indexes apply for meter readings of average subjects made from the camera position or for readings made from a gray card of 18-percent reflectance held close to and in front of the subject. For unusually light- or dark-colored subjects, decrease or increase the exposure indicated by the meter accordingly.

## EXPOSURE TABLE - TUNGSTEN LIGHT

At 24 frames per second (fps), 170-degree shutter opening:

Lens Aperture	<i>f</i> /1.4	<i>f</i> /2	<i>f</i> /2.8	<i>f</i> /4	<i>f</i> /5.6	<i>f</i> /8
Footcandles Required *	16	32	64	125	250	500

\* At 18 frames per second, use 3/4 of the footcandles (fc) shown. When the film is used as a negative material, the values specified should be doubled.

## Lighting Contrast -

The recommended ratio of key-light-plus-fill-light to fill light is 2:1 or 3:1. However, you may use 4:1 or greater when a particular look is desired.

from Kodak



## Developing Times, How to Determine

I had to figure out a way to develop Tri-X 200 for a test.

Dip a clip in developer and time it. It will start by getting lighter, then it will turn darker; when it matches what it was, stop. Divide the seconds by 3. That will be the developing time in that developer in minuets. Repeat. Get an average.

Measure the temperature, too.

I just tried it on my old tri-X film. RO9 1:50 was used, 3ml in 150ml water, 68 degrees F. Many little clips were made about 3/4 inch long each. One at a time were held flat between scissor blades and dunked sideways. A little piece was not dunked on each strip. Longways they darken more at the bottom. Each was held in developer a set time, 24, 27, 30, 35, 40, 45 seconds. Stop bath is needed to prevent the continued darkening of the clips after removal from the developer. This is very good if different temperatures are used, or different concentrations of developer. At 73 degrees the results were different.



Fixer is tested the same way. Clip a short piece of raw film off a roll. Dunk it into fixer and time it to when it just clears. Double that time to fix the film. Note the temperature. Fixer gets weaker over time. It should be tested every now and again. Fixer is saved and used over and over again. It should be used at 68 degrees f not at 80, it eats pictures, too if allowed to work too long or too hot.

Thanks C.B. from You Tube

Dip tests were also done. Lower a clip into developer each minuet one inch at a time in total darkness. Bleach and redevelop. One will look good. Use that.

Standard times work with bracketed exposures to start with.

## Layout

**Name.** Reports on film tests have the name of the film almost the same as the name of the video on You Tube; it is first and bold and in the table of contents.

**Link.** A link to the video on YouTube is next. The name of the video is almost the same as those kept in folders kept on several hard drives.

**Image.** There is usually a photograph at the top to describe what was shot and what it looks like. It could be a still taken from the film shot on a light table. It could be a screen capture of the video being played but in pause mode. It could be a saved frame from the nonlinear editor made into a jpeg.

**Date, Page, Goal, Location.** A text block is next or along side of the photo. It begins with the date the film test was made, followed by the page number of the notes made in my journals. I number sequentially from one notebook to another. The goal of purpose of the test is right after the page number. All may fit on one line. This book is mostly for me so the page numbers stay for now.

Space is next and is put inbetween each section shown in bold here.

**Hardware.** Then, the hardware that was used follows, all listed cryptically in one paragraph: camera, model, lenses, filters, extra stops added for the filter, tripod, or grip if hand held, frame speed, shutter speed, and so on.

**Exposure.** Light is measured and foot candles are listed. Each meter is listed if using more than one. f stops of brackets may appear in a table for clarity.

**Development.** How the film was developed, in what, at what temperature, for how long, with what kind of and how much agitation, and so on. Every factor is noted: chemical, dilution, amount, time, temperature, agitation, frequency, duration, vigor, 1st developer, stop bath or water rinse, bleach, clear, re-exposure, time, distance, watts, 2nd developer, fixer, dilution, temperature, agitation, duration. Many factors may be used the same way every time so not noted. Any change should be noted.

**Results.** Projection of the film is done by making the short strip into a loop and viewing it by eye and noting which exposures look best.

**Suggestions.** What to do next.

# Normal RO9 Developing of Old Film

0B 7266 051517

<https://youtu.be/rzyWeYrwMz8>



7266 051517

This is where I started. May 15, 2017 Page 140  
Try 16mm. South Braddock Avenue at Hutchinson  
Street, Regent Square, Edgewood, PA.

Bolex H-16 T from 1959, Tri-X 200 16mm from  
2002, deep red filter, 25mm Switar lens, 16  
frames per second, 1/40 of a second, bike rail.

Exposure was in very bright sun at a high 320 foot candles. I gave it 3 extra stops exposure f11. This first try was all one shot at one exposure. About 10 feet was shot. Noon.

Developed two different lengths of time in the first developer. The film was cut apart. It was reversed in a Jobo spiral tank on 110 reels. RO9 1:50 14 min the first time. 18 min RO9 1:50 68 degrees F the second time.

Two cameras were in a bag and I went to the corner of Braddock and Hutchinson. The H8Rex4 and the H16T were in the bag. Old Tri-X 200 was in the H16T. f11 at 1/40 was used to expose the 16mm film. Light was 320 High. The camera was braced on a bike rack while I sat on the sidewalk. The time was around Noon. There was a brilliant clear sky. The red filter was used at +3 stops. 10 foot is a lot considering that I loaded in the dark. 12' or twice needed was shot quite by accident. I counted 30. The 8mm film was developed at the same time with the 16mm film. The second longer piece is just a little too dark but videos nicely anyway. The video camera fixed it. Longer development in the first developer lightened it some.

The use of the video camera, a Canon Vixia HFM50, would be an ongoing topic.

## OC 7266 051717

<https://youtu.be/BZ-UOfQ21Mc>



7266 loop 051717

Tuesday May 16, 2017 Page 142 The idea is to expose a bracket test to see many different exposures all developed at the same time. The red barn door and red umbrella were shot, looking right from my back porch.

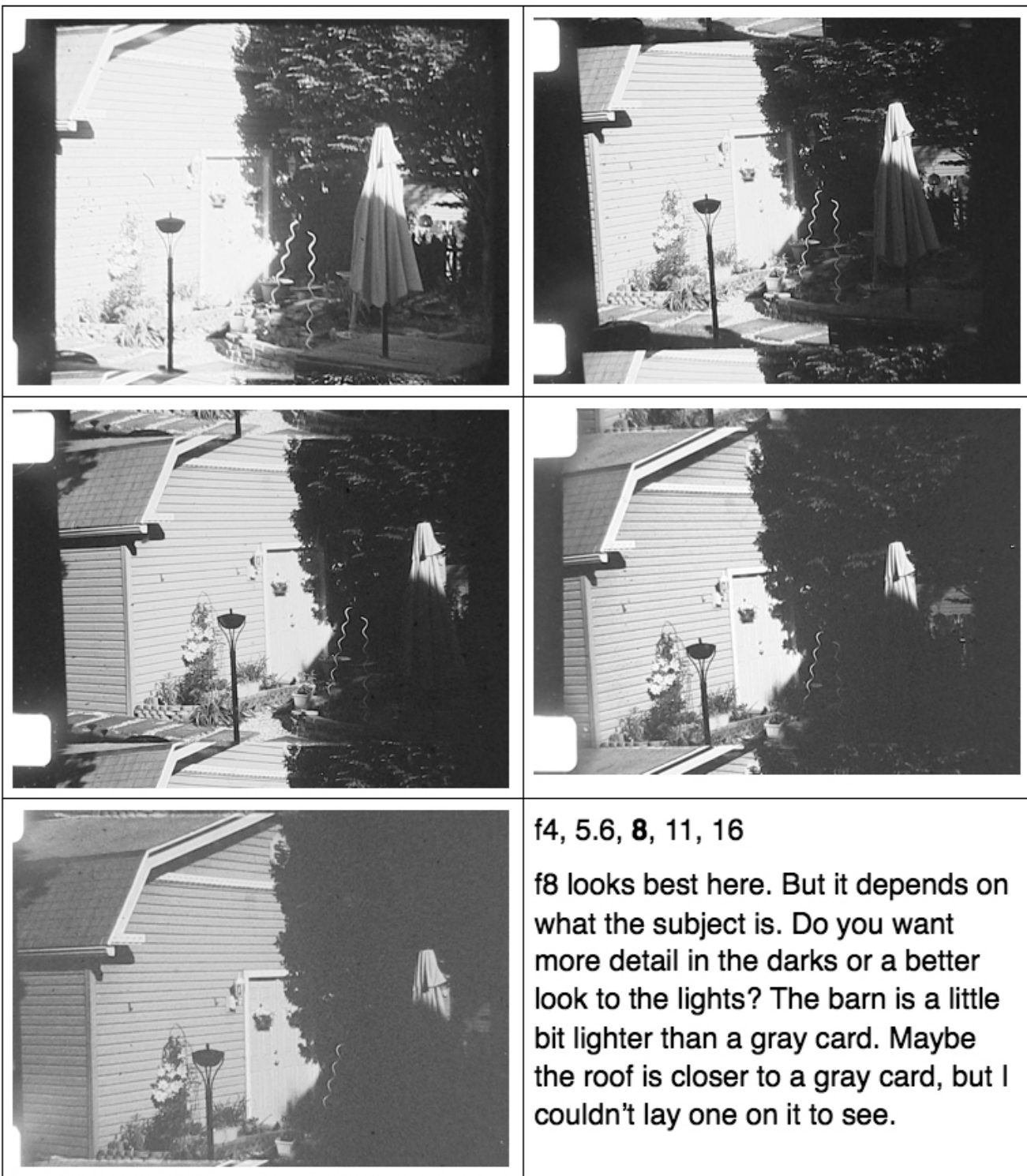
H-16 T, 1/40 th, Deep Red Filter,  
25mm Switar lens  
RO9, 1:25, 18 min both developments  
Dichromate Bleach  
68 degrees F

H16T, Red Filter, 16fps, 1/40, A take-up spool was inserted and the film, about one foot, was loaded onto it. The film was from 2002 and is 200 ASA, or it was, most likely it is slower now. The light was 320.

f 4	f 5.6	f 8	f 11	f 16
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Reversed in RO9 One Shot 1 to 25 at 68 degrees F, 18 minuets in both developers, Dichromate Bleach. longer first developer time of 18 minuets, up from 14. The reverse process made lighter final images. Will increased exposure do the same? Dilution was reduced; concentration of the developer was increased to power up the developer more. 1 to 50 was changed to 1 to 25.

I was trying to figure out how to develop this film. Only by changing exposure have I been able previously to change the appearance of negatives. I never changed the development. Now, I made the development longer. 18 minuets gave a pretty good positive reversal. More exposure may be better. If I use 1 to 25 what will the results be? Then, I went ahead and developed it in 1 to 25 at 18 minuets. Agitation was 3 times every 30 seconds + 3 taps. The first bleach came out cloudy and yellow, when I had developed UN54 with 7266. This time, using only 7266, it came out clear and blacker orange. Second dev same as first.



More developer at the longer time worked to yield great pictures. Old film can be developed. f 11 is the correct exposure but f 8 increases the shadow detail. 100 Asa.

## 0D 7266 loop 051717

[https://youtu.be/zXNykj\\_f7wI](https://youtu.be/zXNykj_f7wI) silent, same film as the previous report.

May 17, 2017 Page 143 Preliminary results are good. The film is black, except where there are pictures, and most of the exposures are visible. The garage, being close to a gray card, is a good indicator of the correct exposure. The red umbrella and door are white because of the red filter. A correct exposure shows the gray of the building next to the door frame. That happens third and forth from the bright end. f8 and f11, the two in the middle.



The image is half dark tree and half light garage in bright sunlight. This composition is very good to see detail in the darks as a limit. It will have to be seen projected to see how it looks.

What exposure to make the film is dependent upon projection at a normal viewing size. A close small size on gray paper may work for recording a video but it is not how a movie is shown projected for viewing purposes. Only a long piece of film at one exposure can be evaluated projected. Bracket tests do not show long enough. Make brackets longer?



## 0E 7266 051517 14minuets loop

<https://youtu.be/lnhprO2FM5M>

May 17, 2017 Page 143 The 14 min and 18 min developed films were projected for evaluation. The projector has a light baffle that moved out of the way when it went fast enough. The image then looked properly exposed on the video but not in real life. More concentrated developer was needed. One to fifty was too thin. One to twenty five gave much better results. A longer time would move developing from 18 minuets into the stand range of times.

This is the 16mm film that was developed reversed in the other video, 7266 051517. Here I looped it and projected it very slowly at first. I thought it was too dark. But I just wanted to see it projected. Surprise! It looked great,



The projector was running very slowly. When it sped up, the picture became very much brighter.



**0F 7266 print 060117**

[youtube.com/watch?v=uGstkFlxRZs](https://youtube.com/watch?v=uGstkFlxRZs)



June 1, 2017 Page 154, 156 Old 16mm Tri-X 200 7266 was developed as Negative. Does the printer introduce jitter? I shot a bracket test left off the back porch.

The Bolex H16T, Mitchell tripod, cable release, 25mm Switar, 1/40

Light was 320-, the left side of the block. f1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22.

Let's say that 8 minuets developing time was called for in the dip tests, considering that the film sample did get darker than it would have had I used a stop bath. I used less than 10 min to push the old film. Draining began at 9:15 and went to 9:45 seconds. So the average developing time would be 9 1/2 min including draining.

The sun came out in the morning and I was ready for it. Sun was on the left or low edge of the 320 block, very bright indeed.



Brackets were f1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22.

F22, getting the least light, is the lightest negative. f1.4, getting the most light, is the darkest negative. The second or third in from the light end shots look good. That would be f11 or f16. ASA is 25-40 in that event. If I had developed less than I did, say at 8 min., then the ASA would be even lower.

f22 is too light but printable. All the other shots after f11 are dark. But the printer can be made much brighter to print through that density.

Print 7266. The reason I wanted to print this old film from 1999 was to see if jitter occurred in the printer. I am reasonably certain that the camera is solid, which is based on from viewing my 2K scans of Foma R100 that were shot on the same tripod. Recent hand held 8mm prints showed jitter. I worried about 16mm.

I needed a solid negative. I needed 16mm neg. to print since I didn't want to print 8mm twice through the machine. I didn't want to reverse two films, or even one more. So I shot and developed this 16mm negative bracket test.

Then I printed it. The same film was used. Does printing on the same film cause jitter? I'd done that using 8mm and got jitter.

Exposure in the printer was a guess. DP3 was 3 on the white dial and UN54 was 1 on the same dial. So, I guessed 2. This film is faster than 3 and slower than 125. Way slower. But, you gotta start somewhere.

Development of the print was an issue to determine. The negative was dark. That is because it was developed longer than the dip test indicated. This print could be developed shorter. I chose to develop the print 8 minuets. Draining the tank was done after the 8 minuets were up. So it was just a little longer than 8.

Good guesses. The clear parts printed blacks, not grays. So far so good. Many more shots are lighter than on the negative. The printer lamp on 2 must have been bright enough to shine through the dark negatives. The development done in less time kept the prints from becoming too dark. Yet, good blacks resulted from the clear spaces between the shots.

Now I have this long film hanging from paper clip wires in my darkroom to deal with. It has to be lubricated after it dries to avoid projector jitter. Lots of leader is on both ends. I had added leader onto the negative so it could be loaded onto the

printer reels. The print stock was loaded as is and ran over the leader resulting in more leader.

The 7266 film is single perf and I forgot to account for that. I got it wrong the first couple tries in the dark, but finally figured out why the films didn't go. They just didn't move at all. The sprocket wheel just spun on the unperforated side of the print film, 7266, not real print film. That was crazy in the dark to deal with. Then it had to be loaded onto a Lomo spiral reel since it was longer than 6 feet.

Development was at 68 degrees F. A water bath was used around the tank. RO9 One Shot at 1:50 was used to develop with for a total of 8 minutes plus the draining of the 1 liter in the smallest LOMO tank. Stop bath was used 1 minute. Fixer 10, Photo Flow 1 min. Lots of washing, too.

Does printing on the same stock cause jitter? No.

This is Tri-X 200 film from 1999 and I never shot it yet. So, I shot a bracket test and developed it as a negative. Then I printed it on more of the same film to see if it would cause jitter. It did not. The film ASA is 25-40 now the way I developed and printed it. RO9 One Shot was used. 1:50, 9 1/2 min to develop the negative, and 8 min + draining time, to develop the print.

Where is the negative? What does the negative look like?

**RO9 One Shot at 1:50  
was used as the developer  
at 68 degrees F  
8 min. + draining  
for the print.  
The negative was 9:30  
in the same developer.  
The Printer lamp was on 2 volts on the white dial.**

This film is the only time I developed 7266 Reversal 16mm as Negative and Printed it.

# Stand Developing in HC-110

## Introduction

Stand developing uses very little developer. I like that. Normal methods of developing use a lot of developer. Way more than I was or am willing to pay for. The results I got from trying stand developing looked great.

The small Lomo developing tank needs a Liter of developer and I use 1100ml. The UPB 1-A takes 1.5 Liters to cover one 50 spiral. 2L are needed if developing two stacked spirals. But, that isn't advised in Stand developing because lots of developer is needed above the film. Two rolls fills the tank to the top. There isn't enough head room. The 100 foot Lomo tank is like the 25 foot tank, it has lots of room above the spiral. However, it needs 3 to 4 Liters of developer. Because those tanks take so much developer just to process one roll of 100 feet I want to save on developer.

Some developers may be replenished and used over and over. I tried that. It takes yet another bottle of developer to replenish the first one. Another way is to extend the time of development if not replenishing. That gets confusing fast and the developer turns black. The developer weakens and has to be used longer and longer; not long enough and the results are darker film than desired.

Stand developing is a one shot process. Use the smallest amount of developer one time and then get rid of it: 1 ml in 100 ml of water. I have even used the first developer again as the second developer and it worked, slower I think, but it was doing the job. Stand developing dilutes the developer 11 ml in 1100 ml of water. Mixing fresh developer is no big deal.

Some rolls of fresh Tri-X 7266 16mm Reversal were bought after I'd tried some things using the old film. I'd figured out that 1 to 25 dilution in 18 minutes and 70 degrees would develop the old film quite nicely. The same thing was used on new film. Roll 1A was bracketed and then developed normally. Then I tried a new thing, stand developing. Roll 1B was stand developed one hour in each development. That worked so well that I tried long takes using the old film in stand 1 & 2. There was lots of old film remaining. It worked well, too.

18 minutes, twice, is a long time to sit developing. Stand lets you walk away.

## 0G Oct 2 Stand 1

<https://youtu.be/z4jEFSs9s9A> Houses and Me



Oct 1, 2017 Sunday Page 293 The old 7266 was loaded - all of it. Stand develop a longer piece of film. I walked around the streets.

H16T, deep red filter, short filter ring, 10mm lens, hand held, 16fps, 1/40, a bad take up spool spoiled some film, both were dropped

Light was 320+, f5.6, +3, 25 Asa, all one exposure.

Development was in the small Lomo 25' tank. 25 feet were loaded onto it. The remaining film was put back into the box. , 10ml RO9 in 990ml tap water, 70 degrees F, agitated at the half hour, one hour total, Bleach 5 min, Clear 3 min, re-exposed to a light, 2nd development started with 6x agitation, more on the half hour, one hour total, fix 10 minutes, wash.

The Stand 1 film is a combination of two films. They come from the last part of old roll one. Lomo stand processed in 25 foot and 50 foot. All was shot with many mistakes made. I did not mix enough chemicals to use the UPB-1A tank first. I like 1 1/2 L in it to cover completely - or even 2L for stand. 25' were loaded on the small spiral. Remainder of film was put back into the box. This smallest tank does accept liquids into the center. 990 ml tap water + 10ml RO9 at 70 degrees f.

It worked great. My video is not perfect. Try gray paper up close, small image. Mix more chemical and use the larger tank. The UPB 1-A needs 2L + 180ml more to cover 2 reels. 1.5 L is good for one reel. Measure the 100' tank capacity of liquid. Better use 4L to cover well and have lots extra. There may be more film remaining to be developed than 50'. But surely at least 50'. Do I have enough chemical to mix 3 more L? There doesn't seem to be enough liquid above the top spiral in the UPB 1-A tank for it to work well as stand developing. I'd prefer more. One 50' spiral is good. The 100' tank is just like the 25' tank. There is a lot of room above the 16mm spiral as there is above the 25' 16mm one.

I could load a 50' spiral to see if the film is longer. Then, rewind it.

## 0H Oct 3 Stand 2

<https://youtu.be/3jUUfYvwTBY>

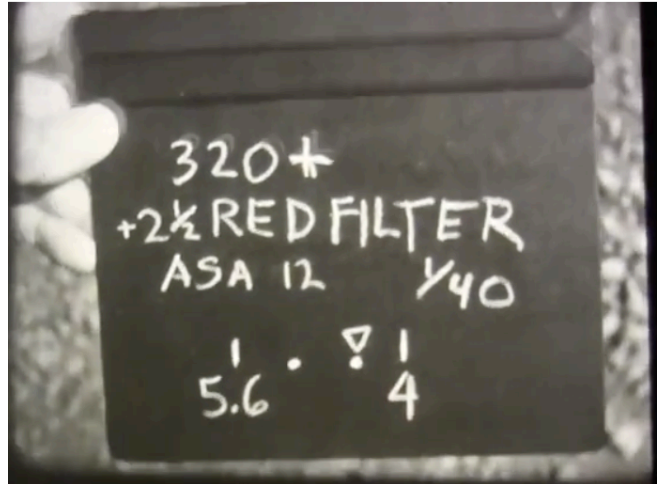
Jan 5, 2018 Pages 296...303...Transcribed. Oct 3, 2017 Old film, same roll.

H16T, deep red filter, short filter ring, hand held, 16fps, 1/40, various lenses,

Light was 320+, slates give exposures, f4-1/3, Contrast was extreme.



shot one



Development was by the stand method in RO9 with a 3-5 min 70 degree tap water presoak. 2 L, 20ml RO9 in 2000ml tap water, 20 inversions to start, half time agitation was 2 turns and 4 bumps up and down. bleach 5 and Clear 3, exposure was 30 seconds a side, second half agitation was 20 seconds to start and a few bumps and turns half way. Fix was 10 minuets.

One hour each development, 70 degree tap water temperature, 30 seconds agitation to start but gently, at the half hour agitation consisted of 3x gentle turns, and I had to stop it turning, bleach had been used two times before so I doubled the time to 10 minuets, same with clear to 6 minuets, freshly mixed fixer 10 minuets long. Washes were loaded through the hose and a funnel from a 2L coffee pot. The tank never overflowed. It stayed on the case. Drainage could go into bottles. New PhotoFlow was mixed as 3/4 tsp in 1L tap water.

I was right about leaving lots of juice above the spiral. Other people posted the same advice. Use +5 CM above the film.

The Medium sized UPB 1-A LOMO tank must use the spiral as a lid on the lower spiral. The top disc isn't required. I left it off so I could raise and lower the spirals during agitation.

Try a 3-5 minuet presoak. Try maintaining temperature in a water bath, too. 68 degrees yields smaller grain than higher temperatures. Maintain the mid time agitation. Agitate gently at first 30 seconds. Agitation increases contrast.

No need to worry. All of the film fit onto the 50' spiral with room to spare.

More chemicals need to be mixed. Now there are 2 x 1L bottles of bleach and clear. 4 bottles in all. 1.5 L is sufficient to do the job but I'll need 3-4 in the big LOMO tank.

RO9 must be 2L to do stand developing in the UPB 1-A tank.

A funnel must be used in the hose to load the tank. A 2L water pre-soak checked for leaks.

The 1st developer is in and the timer is on. You set the timer to one hour by spinning the second hand all the way round to 59 then click the minuets all the way around to 59.

The spiral may be lifted when tipping the tank to drain the last bit of liquid. Temperature was not measured. But, tap water is 70 degrees, just like yesterday.

At 30 minuets agitation consisted of: Lift, twist, drop. 3s times. A short twist, then, I had to stop the thing from turning by itself!

The tank is best elevated to drain fluids into beakers. I used a white bucket at first but it was too uneven. The suitcase worked better.

The beaker is hard to hold. The coffee pot barely holds 2L to the brim. Bleach had to be washed out several times to clear it. A 2L beaker measures out flow so you know when the tank is empty. I had to buy a new larger coffee pot. New fixer was mixed.

Fix 10 minuets in freshly mixed fixer

Washes were loaded through the hose and funnel from a 2L coffee pot. The tank never overflowed. It stayed on the case. Drainage could go into bottles.

New Photo Flow was added. 3/4 tsp in 1L works. It was saved in a 3L bottle made of brown glass.

There are slates.

It starts on the left of the dryer.

Attach the film I projected to the end on the right.

A post on Photrio (APUG) said that pre-soaking causes less contrast. That's good. The part of this film developed yesterday was VERY contrasty. And. Full stand does not agitate in the middle of the time. Well, I do to get even developing. It may cause contrast but mixing up the developer is important, besides, it works.

This film has a lot of shooting mistakes on it. The lens wasn't focused, the filter was off, the wrong lens was used...

The overall film could be lighter. Not 10, Not 20, 16? 12? Exposure was great for the highlights. The shadows are black. The contrast was extreme that day. Less agitation may be worth trying. Pre-soak, less agitation, and 12 ASA?

### **Page 299 Oct 3 Tuesday old 7266 R 16mm**

My first 16mm projectable film. Stand 1. It is the old 16mm 7266 reversed film left over from England. I shot it in Edgewood recently and developed it in Lomo tanks myself. It was reversed so as to avoid getting print film. It has been trimmed of a long mistake but wrong exposures on slates were retained. Leaders were added. Black leader was added to the end. White leader is outside. I wrote on it so I know what it is. It was STAND reversed in RO9. It is 7266, the same as new film. The same techniques work the same on new film. I can repeat this. I can do it all myself. It *could* be duplicated. I'll try that someday.

### **Page 303 Oct 3 Tuesday Stand 2**

Exactly how much film fits on the UPB 1-A spirals? I have to count frames when shooting so as not to exceed that amount. The camera speed was measured.

(No shooting information about the first Stand 1 film exists. I shot off the cuff)

This is shooting information about the second Stand film, Stand 2. Film frame numbers were written down. The start and end frames were recorded. That way I knew when to stop filming and start developing. Skip them here.

**SLATE:** Red Filter +2 1/2, focus at 1 1/4' 16mm Wide Angle lens f4-1/3 (to 5.6)

**ONE:** 8 seconds Left off back porch. Focus at infinity. f4-1/3 16mm WA lens.  
Light was 320+ as written on the slate. ASA is 12. 1/40 second shutter speed.

**SLATE:** same thing

**TWO:** Straight back from the back porch. Same exposure.

**THREE:** The slate was removed from the film for some reason. It is in the notes.  
The scene is from the bathroom window looking left a little at the corner. Pan right. The (trigger?) handle was supported by the window frame.

**SLATES:** Scene 4, no filter, light was low by the window.

**FOUR:** 25mm lens. 3rd floor rear window. Focus pull. Infinity to 5 feet, then back to infinity again. Look at the detail on the Sycamore tree bark next to the white building. They change pretty fast.

**SLATE:** Same exposure. Nicely framed and exposed. 12 ISO

**FIVE:** Garage from the chair on the back porch. Wide shot. Red f4-1/3 to 5.6

**SLATE:** low scale light 640-1 (or 320+2) f2.8/2. No filter.

**SIX:** Left yard caddy corner yard in shade location shot. 25mm Switar. 30' focus

**SLATE:** 320+, +2 1/2 Red filter, ASA 12, 1/40, f4-1/3 or f5.6+2/3

**SEVEN:** Looking right off the back porch, tilting up from bushes to the garage.

**SLATE:** f4+1/3 towards f2.8. Open lens two clicks.

**SEVEN 2:** Right off porch, garage shade. Bushes unaffected by increased exp.

In the darkroom, unloading the film, the film had jammed. It didn't get taken up into the film spool. Bad spool. I wound it onto the spool. While doing so, film wouldn't go in; there was a tight spot. I bent it outwards and finished. I put that spool aside after developing had finished.



## **Page 305 Developing**

The film was pre-soaked.

1. The first developer first half was agitated 20 times.  
20ml of RO9 was put into 2000 ml of tap water.
2. The first developer second half got 2 1/4 turns and 4 bumps up and down.  
Rinse, Bleach 5 min, Rinse, Rinse, Clear 3 min, Rinse, Rinse, re expose 30 seconds a side. One part stuck together. About two spirals remained unfilled.
3. Second developer first half. The entire tank was put into the white tub and filled with 68-70 degree water. I agitated 20 seconds to start.
4. A few bumps and turns started the last stand developing section. New fixer in the brown glass bottle was used. 10 minuets.

Quite a lot of film stuck together on the spiral. Most was fine. It had jammed in the camera due to a dropped bent spool. It looks so dark and is not at all like still negatives. Projection is different . There are pictures.

**Projection:** I was shocked at how nice the first shot looked! The shaded yard was dull dull. The garage right shots were very dark, but the increased exposure helped a tiny bit.

This was old film and 12 asa. Is new film the same or higher asa in stand? 25

**The LOMO 25 foot tank holds 1300 frames of 16mm film, Foma won't fit.**

## 7266 Stand Conclusions, Table

All but one of my tests and films used a deep red filter. The old film was slower by one stop than the new film. All the tests were the same exposure basically. The red filter may or may not be +2 1/2 for the filter. A filter is not needed. A smaller aperture could be used. I need to learn to expose without using the red filter. All my tests were made on bright sunny days. Standardize the temperature of tests. They are all over the place. Rollei Compant RO9 One Shot Agfa Rodinal Formula Film Developer - 500ml is \$12.19 from Freestyle Photographic Supplies

Adox Rodinal Film Developer - 500ml costs more \$15.99

It can be mixed DIY from Tylenol and Lye but I will buy it ready made.

name. page. Light. filter. f stop. dev. dilution time. temp. filter. iso asa

1B	260	320	Red	5.6	RO9	1:100	60 min	76	+3	25	
1E	267	320+	Red/0	5.6/16	RO9	1:100	60	77	+3	—	d
1F	270	320	Red	5.6	RO9	1:100	120	76	+2.5	20	
1G	275	320-1	Red	5.6	RO9	1:100	60	78	+2.5	25	
1H	276	320-	Red	5.6+1/3	RO9	1:100	60	78	+2.5	25	
1P	271	320-1	Red	5.6/4	RO9	1:100	60 + + agitation	73°	+2.5	25	
STAND 1											
STAND 2	303	320+	Red	f4-1/3	RO9	1:100	60	70	+2.5	12 ASA	

ISOs are not correct? Agitation must be taken into account. Use the light meter better, cover it, read it both ways, uncovered and covered. Fix? 10 min. at first.



## Table Roll 1

The dots on the left side margin indicate which tests were done as Stand Developed. Those without any dots were developed in a Normal manner. The following pages will group them into two groups, Stand first then Normal.

New 7266 in H16 T at 16 FPS 1/40

	Name	Page	Light	Filter	fstop	Dev.	Dil.	Time	Temp.	RNP		
	1A	255	320-1	Red	5.6	R09	1:25	18	75	R	+3	
•	1B	260	320	Red	5.6	R09	1:100	60/60	76	R	Stand	STAND
	1C	263	320	Red	8.5/6	R09	1:25	22	68	R	+3	
	1D	265	320	Red	4.5/6	R09	1:25	30	68	R	+3	
•	1E	267	320+	Red	5.6/16	R09	1:100	60	77	R	+3.3	STAND
•	1F	270	320	Red	5.6	R09	1:100	120	76	R	+2.5	STAND
•	1G	275	320-1	Red	5.6	R09	1:100	60	78	R	+2.5	STAND
•	1H	276	320-	Red	5.6/4	R09	1:100	60	78	R	+2.5	STAND
	1I	279	320	Red	4.5/25	R09	1:25	22	68	R		Copy 1C 1049
	1J	280	320-	Red		R09	1:10	40	80	R		
	1J	280	320-	Red	4.5/6	Paranol	1:25	22	68	R		
	1K	284	320+	Red	5.6	Paranol	1:25	22	68	R		DONE TOGETHER
	1L	284	320+1	Red	8.5/6	Paranol	1:25	22	68	R		
	1M	285	320	Red	4	Paranol	1:25	22	68	R		
	1N			chewed up in camera								CONFUSED
	1O	286	320+	Red	5.6/4	Paranol	1:25	22	68	R	DARK	FLASHED
•	1P	271	320-1	Red?	20/50	R09	1:100	more agitation	73°			STAND +2.5
	old 7266 was used in stand developing next then 7222 was used											
•	1B	260	320	Red	5.6	R09	1:100	60 min	76	+3	25	
•	1E	267	320+	Red	5.6/16	R09	1:100	60	77	+3		dark
•	1F	270	320	Red	5.6	R09	1:100	120	76	+2.5	20	
•	1G	275	320-1	Red	5.6	R09	1:100	60	78	+2.5	25	
•	1H	276	320-	Red	5.6/4	R09	1:100	60	78	+2.5	25	
•	1P	271	320-1	Red	5.6/4	R09	1:100	60++ agitation	73°	+2.5	25	
	STAND 1											
	STAND 2	303	320+	Red	4.5/3	R09	1:100	60	70	+2.5	12 ASA	



# Stand Develop New Film

1B 7266 titled

<https://www.youtube.com/watch?v=NAjrn76POqY>

Sep 20, 2017 P. 260 H16T, Deep Red Filter, 25mm Switar lens, 1/40, 16 fps

Tri-X 16mm new film REVERSED  
RO9 Developer 1:100 76 degrees one hour twice  
Potassium Dichromate Bleach  
320 foot candles 1/40 16fps Bolex H16T 25mm Switar lens  
Deep Red Filter



Light was 320, Bracket test, f22, 16, 11, 8, 5.6, 4, and f 5.6 projects best.

f22	16	11	8	<b>5.6</b>	4
1	2	3	4	<b>5</b>	6

Development was by the stand method. 3ml RO9 was put in 300ml tap water. The mix was 76 degrees f Room temperature. It was hot in the summer. 20 inversions were used starting out the one hour stand first 30 minuets. Timers were set. Now I am free of the darkroom. My notes do not say what the agitation mid stand was, but an index card does. 3 inversions were used at the 30 minuet time. Temperature was 76 f. 2nd developer was new RO9 1:100 76 f. Bleaching was 5 minuets, clear of bleach was 3 min, lots of washing was done in-between. Re exposure was 30 seconds a side, rotating the reel, up close to a bare 60 watt bulb in the cellar. I have no note about how long it was fixed, but I had been doing it 10 minuets.

I used to include f2 and lower. No more. Stand will push the film, or so I thought. f4 goes lighter. Use the red filter to be like the first test, 1A. Figure 5 feet + leader. 5 x 40 frames per foot = 200 divided by 6 exposures is 33 frames a shot. try less agitation to start.

Red Filter +3. Shots: 30, 3, 30, 3, 30, 3, etc. I wrote them all out. Blank frames were messed up because I didn't cover the lens.

This film was cut apart after projection and only the best exposure was saved. There is no loop anymore. I don't remember what the blacks looked like.

Light was 320. F16+ was the target @ 200 ISO and then with the Red filter at +3 more stops of light exposure became f5.6+

## Results

It is real black. I can see the first pictures. My single frames didn't work. I failed to cover the lens - HA. I wonder if there will show a difference?

I had stretched wide and filled the reel. Film does not reach the floor. I wiped it between 2 fingers. That may help to avoid spots or streaks.

It is really much darker than the previous film. Best projection will be what shows what is what. I chose f5.6. If I took the filter off, f16 would be correct. Box speed.

1/40 f16 320 Red filter +3. But it is 3 ISO stops. if you set the meter to 320 foot candles H and f16 to 1/40 and If the red filter is +3 then, removed f5.6 to 8 is one stop to 11 is 2 stops to 16 is 3 stops. ASA is 200.

I like this developer method because it is the first time sky has darkened and clouds pop while ground stays light. I've never had that happen before.

Previously, exposure would have to be reduced to see darker sky and nice clouds. That always underexposed the ground. Likewise, if the ground was properly exposed, the sky would be white. Now I have both nice darker blue sky, nicely rendered clouds, and properly exposed trees and buildings.

Use this again. Fantastic results. Clouds look right !!!

Added note: 200 Asa and 320 High scale foot candles is f45 approximately and 1/200 is f16 actually 1/260. If I had covered the Sekonic light meter to shield it from the sky above then light would be lower by up to one stop. 160 to 320 is 1/200 at f16 and +3 is f5.6. Whatdyathinkodat?

another video is not titled...

## 1E 7266

<https://youtu.be/C8YNEqT95JI> Jan 5, 2018

**Tri-X 200 16mm Reversed  
RO9 1:100 one hour 76 F  
H16T, 1/40, 320, f5.6 Red filter & f16 no filter  
too much Photo Flow caused spots  
wrong speed, gray slugs worked great**

September 23, 2017, Page 267 I wanted to do a different test but there were no clouds. So, I decided to try to find out just what the red filter did. I took the f5.6 best exposure from the previous test as a starting point for the first shot. It was too dark. Then I took off the filter and closed the iris 3 stops to f16. That one looked correct. My notes confirm that f5.6 was first then f16. But, I had cut the film and only kept the lighter of the two exposures. So it is inconclusive. Repeat.



I do not believe it. The first one is supposed to be f5.6 and the second without a filter f16 brighter. No way. Do it again, but do not stand develop.

After this test I started using +2 1/2 instead of +3 with the red filter.

The sunlight changed between the two shots.

Page 267, Sep. 23, 2017 Sat. Stand Reversed

Clipping the end of the head of the film before loading it into the Jobo spiral really works. I stretched locked my arms, then rewound a little to cut it off and got an exact load onto the spiral. A gray card was used in full sun up close out of focus on an angle and not perpendicular to the sun at f5.6. Use a gray card between shots instead of black film made by covering the lens. The light was clear blue sky at 10:50 am. I wanted clouds. 70 frames x 3 = 210 + grays. Reset the counter to 0 and end on 20 (?). 12:20 pm still no clouds. 320+ light. Super bright. No clouds appeared, so, I changed the experiment rather than waste the light. Now, what is the Red Filter supposed to be used at? With Red f5.6. Without Red f16. Both should be the same if the filter factor is a +3 stops. With a filter the sky is made darker, without the filter the sky will be lighter.

Either way, I get to see longer projections and I get to try and duplicate stand developing.

Look at the film edges for developing artifacts and inconsistencies.

Perhaps agitate 2X at 20 and 40 min 1 or 2 times

Mitchell Tripod, Lens filter set, cable release.

I still like the idea of using so much less chemical, 3ml instead of 12ml. Temp is irrelevant. Also, I don't have to agitate every seconds. They are both great reasons to perfect STAND developing.

One person on forums I read about uses the top reel to develop film by the stand method, because chemicals fall and concentrate at the bottom. ? More agitation 2x instead of 1X helps?

RO9 1:100 77 degrees One hour, 20 inversions to start. 3 inversions at 30 min. Dichromate Bleach.

Will any of the f16 show? I hope.

I read that 5 ml in 500 works better than 3 in 300. JOBO reels fit into Patterson tanks without the core so more developer could be used. No more than 3 ml can be used in the JOBO tank as it only holds 300 ml. 5ml are considered the minimum to use on a 35mm film. 5:500. Reels can be spaced and stacked up off



the floor of the tank, using multiple reels. Many tests can be shot on separate 6' pieces and then all developed at one time.

#### Results:

Both shots fit. The second at f16 is lighter. It did not have the filter. F5.6 did have the filter. I decided to use +2 1/2 with the red filter from now on even though I was confused about light and dark. More light makes a lighter image, reversed.

Tri-X 1E was projected. Yes, the f5.6 is way too dark. The f16 shot looks great. The film has spots from too much Flow. Gray single frame shots in-between takes worked great, eliminating most of video flash frames. Manual mode is even better to use.

The light may have been a little different. I had to wait after shooting at f5.6 because clouds dulled the sun to 320- from 320+. That darkened the shot. The sun did get brighter for the f16 shot. By that time too much had changed between the two shots to be accurate. Try again.

I was looking for edge artifacts and used the light box next. I was annoyed that f5.6 didn't work.

1F 7266

[https://youtu.be/PU\\_oJ-HKUoc](https://youtu.be/PU_oJ-HKUoc)

Tri-X 200 16mm Reversed  
Stand Developed for two hours  
in RO9 1:100 78 degrees  
agitate 15 times at the start then  
3 times every 30 minuets  
Dichromate Bleach  
Repeat the same method 2 more hours

September 24, 2017 Page 270 Stand Develop film two hours



H16T, hand held, trigger grip, Red filter,

Light was 320, +2 1/2 was added for the filter.

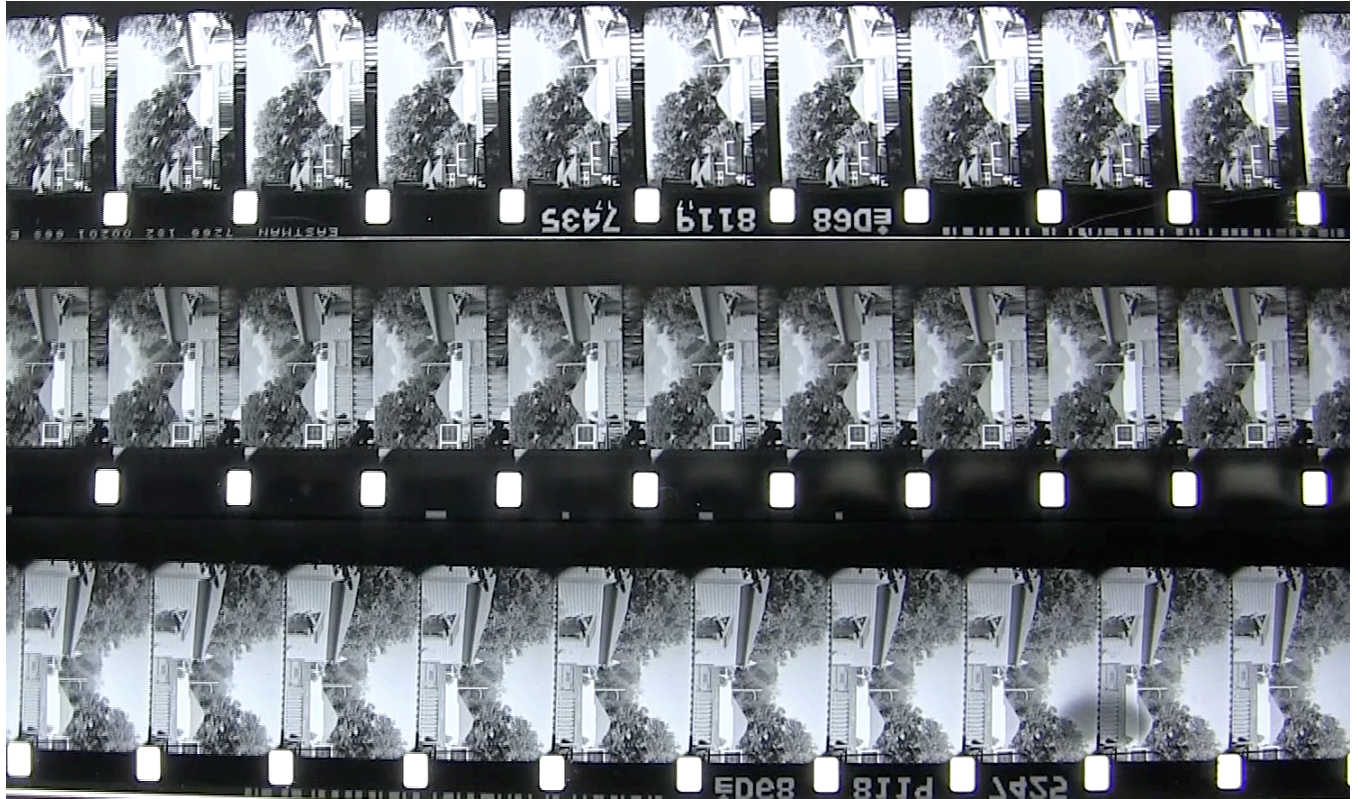
Development was longer and film became darker: 15 slow inversions started the first 30 minute development. RO9 1:100 3ml in 300ml room temp 76 f at least 6' of 16mm film. It all fit on the reel. I'd locked my arms wide apart, then rewound some. Too much. Rewind less next time. No tail remained outside the spool. 3 extra inversions were done on every quarter hour. Extra agitation along with more time made film darker. 2 hours were done. Bleach was 5 minutes, clear was 3 minutes, re exposure was 30 seconds a side to a bare 60 watt bulb in the cellar. The second development used newly mixed RO9 1:100 this time it was 78 degrees. Two hours were done. Agitation is not noted for the second half.

There are 5 sets of exposures. 5.6 looked right. They start light and end normal, not dark. Brilliant clouds are at the end. I chose f5.6 over f8 but 8 had better clouds but darker trees. Did 3ml exhaust? Would 5 ml in 500 work? Contrast was increased over 1B one hour stand. Perhaps too much to see those clouds clearly.

What if I hadn't stand developed the second developer and used D-95 instead? The first developer should have lightened the film and raised the ASA.

## 1E 1B 1F

<https://youtu.be/kQ5FXymGULg>



Sep 24, 2017 Page 271

The icon on YouTube shows two rows of film.

Here are the three different films seen together I talked about. 1E is on the bottom, 1B is in the center, 1F is on top. They were all stand developed.

1B, 1E, & 1F were cut apart, the best exposures were saved. Seen side by side, contrast is apparent. 1B is best. 1E was f16 without a filter. 1F was 2 hours. Red filter increased contrast, which I like.





1E No filter was used. f16 in bright sun.



1B





1F. The lights look overexposed here.

## 1G 7266

<https://youtu.be/vX0BCrnGkY>

September 26, 2017 Page 275 Stand Test Focus Pull Looking left off the porch.  
20 ASA, Use 1/3 stop on either side of the target exposure.



H16T, 1/40, Red filter, +2 1/2 stops, Trigger grip, slate.

Light was 320-1 centered. Stand test. Focus pull. Tilt. 25mm Switar lens, Red filter + 2 1/2, focus was infinity to 30 feet and back to infinity. Tilt down, focus pull, tilt up, changed focus again.

f5.6 was used. Wrong. (1/3 more was the target).

I did this test just to have something to do that day.

Development was in a Patterson tank on a Jobo 110 reel. This film was stand processed along with 1H. RO9 1:100 78 degrees one hour twice. More developer may be better to stand develop with.

Slate shots instead of using a gray card. This film has two slates. One is on a white board. It could not be erased and was trashed afterwards. Focus close, close the lens 2 stops or more because it is white. This film shows the left view off the back porch of all the fences. It is a tilt down and up again. The focus is changed from infinity to 30 feet or less then back to infinity. More exposure wouldn't have hurt. +3 stops may be better not +2 1/2.



## 1H 7266

[https://youtu.be/u\\_O-nHtP1iw](https://youtu.be/u_O-nHtP1iw)



September 26, 2017 Page 276 STAND  
TILT focus pull

H16T, 25mm Switar, Red Filter +2 1/2  
Trigger Grip Stand, ASA 20, infinity to 30 feet  
to infinity sky ground sky, slate focus 1 1/2  
feet, side finder adjusted

Light was 320- the low side of 320, it  
increased a little bit and the exposure was  
increased to f5.6 and 1/3 stop more towards

f4. I focused closer to the plant this tilt but not as much as it should have been. No clouds though. I have to do something! The white slate was f11, the black slate was f5.6. The building won't glair now. Slates were tilted or slanted or cocked so as to reduce glair on them.

5ml RO9 in 500ml tap water in a Patterson tank at 78 degrees. I could only just see the liquid in the center of the funnel in the tank, not above it at all. The film was put onto a Jobo reel and put into the bottom of a Patterson tank. An empty reel was put on top. 15 slow inversions to start, it had lots of air. This is my first 2 strip stand development. Photo Flow was measured 1/2 tsp in 1000ml

At the time I was disappointed by the results. There are artifacts along one side of both films, 1G & 1H. Because of them I chose to drop using stand processing.

However, I later learned that they were caused by the film sprocket holes being in the groove of the 110 reel. Lomo tanks do not cause the same thing to happen.

Light increased a little bit from 1G. The film ran 10 of my count. I heard it click half way up the right side of the scene tilt. I focused lower to the plant and closer but probably not close enough for the plant. This Jobo will go above the first 2 and be capped by another. 500ml will be mixed at least.

Cutting a center point on the film end certainly makes loading a spool easier. Same thing goes in loading a 110 reel.

Film looks dark hanging to dry. Slates don't really show. They look great using a magnifying glass, The white version slate board is dark gray. I closed the lens instead of opening it. Letters are in focus near as I can tell.

They both projected pretty much the same, no glair. Could be lighter. Focus was great. The plant was sharp. H has some crap going on but film is totally clear. Perhaps it was too close to the top of the tank? No. One more click on the ISO dial below 25 from 20 to 16 may look nicer. I did drop H while loading. Chemical and or a little water could have gotten on it. I felt things on one side when I ran it through my fingers drip drying it.

Darker shadows means greater contrast most likely a result of higher temperature of 78 degrees.

After videoing both loops I saw artifacts on both films along one side, the left on the screen. The light box shows black film around sprocket holes while the sound track side varies in density a lot.

This may be because film sat in grooves and wasn't agitated enough.

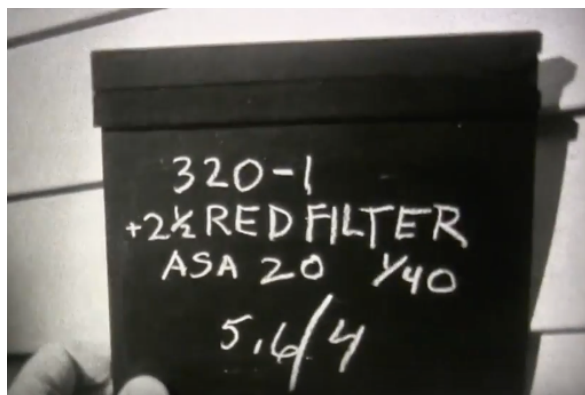
I eliminated this stand method because of the artifacts that I saw. I tried more frequent agitation to get rid of them. 1C didn't have any artifacts.

## 1P 7266

<https://youtu.be/TmV-7aZ9FVU>



7266 1P  
Pages 271 & 287  
September 29, 2017  
I tried to get rid of the artifacts using Agitation  
in RO9 every 15 min 6X  
3.5ml in 300 ml 1:100 one hour



Sep. 29, 2017 Pages 271 & 287. Try to get rid of artifacts by increasing agitations. Pan Right straight back view of roofs.

H16T, 1/40, 16 fps, Red Filter

Light was 320-1 f5.6/4 Red filter +2 1/2

Development, RO9 1:100, 3 1/2 ml in 300ml tap water, 73 degrees, room temp, 22 agitations to start in 30 seconds, the

timer was set to 15 minuets, Agitate 6X every 15 min. to try and get rid of artifacts . So, instead of one inversion cycle half way I did three inversion cycles on the quarter hour and twice the inversions in each cycle.

These notes were started on the wrong page in the notebook. I really like the creamy smooth quality.

The video looks great, but there is crap on the left side of it.

Real close to perfect. Exposure is good. Sprocket edge varies a LOT. Increased agitation had No effect. Sound edge was black but some flickering occurs. Very little. Still there. Could be the reel. Other films don't have the same problem.

Try it on a LOMO reel.

It is so close to being right more work is justified.

Both sides of the Jobo reels have grooves. Could it be because the reel is on the bottom of the tank?. Try putting the film on the top. I do not know which way the reel was put in, sprockets up or down. That will be looked at. Check other films. This could be made right.

More bad ideas about Jobo reels occur. Then good ideas about Lomo. The way film is on the take up spool, the sprocket side is in the groove. The top is smooth. Only half the sprockets are inside the groove. That should make a big difference.

The Jobo reel obscures both sides of the film completely, way more than the Lomo. Instead of increasing agitation even more, try the small Lomo tank instead.

Film would have to be put on another spool to put sprockets on top.

Sep 30, The Small Lomo Tank. 1 Liter fits, a little more too, but it is not needed as the one spiral is deeply submerged.  $1000 + 10$ . 990 ml can't be measured easily unless I use the tall cylinder.  $990 + 10$  is more concentrated than  $1000 + 10$ . Not by much, though. Which is correct? 1 part in 1000 should be  $1 + 99$  Right? Melita said it is  $99 + 1$ .

## 3G 7266 in HC-110

<https://youtu.be/TxncJDWh6kY>

January 12, 2018 Page 422 Try a new developer, HC-110 on roll 3. Raining. Dark. Stand develop 16mm 7266 in HC-110 just to see if it works. New camera.



Hardware: The H16Rex4 had been loaded a while and I wanted to shoot some film to unwind the spring again. A take up spool had been put in it because I intended to shoot all the remaining film on the roll. However, I learned about HC-110 being used in Stand developing and had to test it. So, I back wound 7 cranks first. Shot 6 or 7 clicks plus a squirt. 25mm Som Berthiot lens, The scene was shot straight back from the third floor window with the window open and the camera sat on top of the frame.

Exposure: Light was 6.5 to 25 on a Weston IV or 160 incident low scale on the Sekonic. 25 ASA f4+1/3 stop more. I used the Weston IV from the window. It read so low, holding it downwards, that I had to raise it up lever to get a reading at all, that 25 was as high as it would go, even pointing it up. The high scale had been used with the baffle closed. So, I guessed, set the lens, and shot some film. I had

to see if HC-110 worked. The Weston light meter read 25 from the 3rd floor rear. 1/50 f4+1/3 ->f2.8 infinity 25ASA.

Development: HC-110 1:100 One hour. 1:100. bleach in dichromate. Stand one hour more after re exposure. 20 agitations to start. 2 agitations on the half hour. 68 degree water. 3' long. 3ml in 300ml tap water at 70 degrees. A water bath in the cooler was used at 68 degrees. Film was put into the bottom of the Jobo tank on the 110 reel with an empty reel on top of it. The bottle of HC-110 hadn't been stirred up for the first developer. It had sat in my darkroom a long time. But it poured out easily. The film wasn't pre soaked. The liquid was mixed using hot water to get it all out of the measuring flask.

7266 3G  
Raining, 25 foot candles Weston straight ahead  
6.5 down. Incident was 160 low scale.  
f4+1/3 stop ->2.8  
HC-110 one hour, twice, reversed  
Dichromate bleach, 68 degrees in water bath  
3ml in 300ml  
did you see the man in the doorway?

At the 30 minuet time the film was agitated 2 times. After bleaching it I saw some ghost images and I knew that it would develop all right. 150 ml of bleach and clear were used with additional agitations. Re-exposure was 30 seconds a side 4 inches away from the ceiling light and the reel was flipped over a couple times at 90 degree intervals for 360 degrees. 300ml of water from the water bath in the cooler was used with 3 fresh ml of HC-110 for the second developer. 68 degrees were used for everything. 20 inversions started the second development. 2 inversions were given at the half way time of 30 minuets. Fix was tested on a piece of the film that had to be removed because it would not back wind. It made noise and I opened the camera in the dark and had to cut the film. That is why it was boxed again. The piece of film cleared in 1 minuet. I Fixed it 3 minuets.

Film was off the spool and out of the gears when I opened the camera. The film was much shorter than I thought it would be.



The black leader is very dense. The images look great. They should project nicely, and did. This worked!

Projection is right on. Exposure looks the same as the rainy day. The film is not dark. It could be 100 ASA! More on exposure and ISO follows... 160 incident  $f4 + 1/3$  stop  $\rightarrow f2.8$  1/50 ASA is close to 100 first try. 125.

I can't figure ASA on the Weston yet. Not like on the Sekonic. Wait. If I use 6.5 as the down reading 1/50 goes next to  $f4$  towards  $f2.8$  and ASA is 100. Light had been 160 + 1 block on the Sekonic incident meter. If covered, the incident reading would have been 160 or even lower.

I read the light again in the yard after I'd loaded the Jobo tank. But the Weston gave me the same reading, holding it straight out, as it had upstairs. The 6.5 was had because I remembered to open the baffle for low levels of illumination. It went up to 25 on the low scale as it went down to 25 on the closed baffle high scale.

I don't know about you, but I got an ASA of 100. Both meters gave me the same thing. After some fiddling. It is a tricky bit and I am still learning but there it is. 100 ASA on the Weston Master IV reflected meter and 100 ISO on the Sekonic Studio Deluxe II incident meter. Not bad. Not bad at all. That is way better in fact than RO9 gives. 6.5 foot candles were indicated when the Weston meter was held pointing downwards. It then read 25 when raised to be straight ahead. That was using the low scale with the baffle open. The Sekonic read 160 + 1 block, but I know that if I had covered it with my hand, blocking overhead light some, it would have read one block lower. Been there, done that. Both meters then were set to have 1/50 next to the  $f4 + 1/3$  which was the aperture I'd used. That made the ASA/ISOs to be 100. Cool.

Film was taken out of the camera and put into a Kodak box, taped shut, labeled. The spring had unwound completely. More exposure may have been given the film as a result of the slower speed at the end of the spring.

## 3H 7266 in HC-110

<https://youtu.be/EQCQ1MZr2f4>

January 16, 2018 Page 424 I wanted to do a film before it got dark again. Pan left from the 3rd floor straight back.



H16Rex4, 1/50, 16mm lens, infinity focus,

Exposure: It was very dim out and late, overcast, snowing. I overexposed, f4 was used, Incident light was 20H or 640 low. 100 ISO was used. This time the Weston gave a 100 foot candle reading. I gave 3 stops more light to get closer to f4. That door is equal to a gray card. I wedged one on the door knob and from upstairs the card can not be seen. A Minolta spot meter was also used from the open window aimed at the man door of my garage. It gave a reading of f4-5.6. I opened the lens 1/2 stop more to f4. The Sekonic was used first out in the back yard. 20 H and 160 Low were set. The reading would be between both settings.

20+ Red, and 160-1 Black. f5.6 -1/3 stop towards f8 was indicated. The Minolta spot meter was aimed at the man door on the garage from the 3rd floor rear open window. It read between f4 and f5.6. That was the needle on top. The digital reading said 4.0 and 5. 1/50. 100asa. The Weston held pointing down was brighter than straight ahead. It was 100. Since it is a reflected meter the snow would be gray that way, so I added 3 stops to make the snow white and got f4 -2/3 towards f5.6. I overexposed at f4.

Development: HC-110 was used to develop by the STAND method. presoaked 10 minuets, limited agitation, 3 1/2 ml in 300 ml of water, 68 degrees F in a water bath. The cooler was filled with 70 to 69 degree F water. Dichromate bleach. One full hour was given to both developings. Three inversions to start, one inversion at the half way point; and this was done twice. I did everything I could to lower the contrast except shorten the developing time.

Now, with overexposure and bright highlights I am supposed to underdevelop to reduce contrast. But, stand developing reduces contrast anyway; so does presoaking. I will go for one hour anyway. I will agitate much slower and less at the half way time. Ya gotta start somewhere. 3G could have been lighter and had more contrast anyway.

During developing, agitation was limited to 3 inversions done very slowly at first then 1 at the half hour. One hour was used. 3.5ml of HC-110 was used in 300ml tap water. A 68 degree water bath was used. 5 min bleach using 150 ml at 68 degrees with 6 agitations every 30 seconds; 3 min clear using the same methods, 30 seconds re-exposure on each side plus four flips. Snip off tail.

After re-exposure the second developing was the same as the first. The water bath cooler sat on a chair in front of the heater.

Fix was 3 min in 180 ml at 68 degrees F. Washes were by the Ilford method, 10 inversions to start, refill, 20, 30, 40, 40.

Photo Flow was a one minuet soak. Two fingers were used to wipe drops off the film. The film almost touched the floor. The film was streaked with residue. I wiped it off with a damp tissue later. I later learned to use filtered water.

Pictures are there but thin. After all, it was dim outside. Snow shows lots of detail. The image is real soft overall. I don't like it. But it is a look. Highlights are not blown out.

The projected film isn't overexposed but it is dim. It could be much snappier if higher temperatures were used, much more agitation was applied, and a longer first developing time was given.

Try it.

The Jobo 110 reel causes the flickering, Lomo tanks don't.

## 3i 7266 in HC-110

<https://youtu.be/10sym-MDZPY>



Jan. 17, 2018 Page 426 New Kodak Tri-X reversal 7266. A low contrast method of developing film shot on a high contrast day. It was an attempt to photograph snow in bright light. Many shots were made from the third floor. Seven in all. This film is about shooting high contrast snow. Now that HC-110 developer can be used, I can begin shooting more film.

H16T, 16 fps, 1/40, The 25mm Som Berthiot RX lens was used with the focus set on infinity at f16 without any filter. How would a RX lens on non Rex camera do?

Light was between 160 and 320 incident on the Sekonic high scale, the person door on my garage was f16 to f22 spot metered; that door is my gray card. Sunlight got bright, sometimes, when it was, the door was f16.6 or f16.4, using the Minolta light meter. The brightest sun was used. f16 was 1/2 stop open unless the sunlight dimmed, which happened frequently. Exposure was based on snow technique. A Weston reading at the lowest was 400+ foot candles. If I set

ASA to 200 and add 3 stops more light, to compensate for the snow reading on the light meter, it gives me f16+1.

Developed in a small LOMO tank for one hour twice using HC-110 like the other two tests, minimal agitation, 68 degrees, f16 was used, The freeze frame at the beginning of the video was from the previous film, 3H, an overcast snowing day, but developed at the same time along with this sunny day film.



Film on the rewind reel from the camera went onto a nail or a dowel rod flat on the wooden table top to fill the LOMO spiral has sprockets away, delivering from the bottom towards the right. It is as it is in the H16 cameras. That is how it was put into the Lomo, sprockets down, emulsion in, fed right to left into the grove, V pinched, then Left to right back out. Emulsion was out when developed. I turned the film in my left hand emulsion down, away from me or left, then cranked the handle clockwise. Half the reel was filled.

There was a 10 minuet presoak at 68 degrees. A water bath was at 68, also. This Lomo tank loads through the center hole, but draining takes over one minuet.



I needed more bleach. Potassium Dichromate is 1/2 a teaspoon or 5.0g in 1000ml water. Sulfuric acid goes into the water, 10 ml, not the other way round. Clear is 50g per Liter or half a beaker (60ml). 3 rattling cranks started the first development. While film stood in the first developer, I mixed the Clear. The Lomo tank stood in the big white tub in water. The smaller coffee pot was used. 1L was made. No attempt to save either was made. They were drained into the 2L beaker to dump together. Everything was 68 degrees.

The blue suitcase was put on the plywood shelf over the sink. Draining into a jug or pot or jar or beaker is easier that way, when the Lomo is higher.

Water in the big white tub had to be raised in temperature. I just squirted hot water into it. Excess drains out on its own.

Halfway I gave one 1/4 rattle turn and held it still to stop it from turning. Water was warmed over 70 as it was only 66 at that time.

I had to warm it again, too.

Bleach came out quite cloudy. The reel is 3/4 full. A tiny piece is on it from 3H. 1100 ml tap water + 11ml HC-110.

At the start of the second developing I gave it 3 rattling 1/4 turns.

Drying, the base was wiped, using a paper towel. 7 loops go around the rack.

This film gave me a base upon which I can make adjustments.

It used 3 light meters

HC-110 was used to Stand develop 7266.

The small Lomo tank was used.

1L was used but 1100ml of developers.

Projected, the film looked good. Contrast was controlled. Textures in the snow were visible. No glaring was seen. It looked good. Not great. Not startling. Just good. Not too dark. Not too light.

### 3J in HC-110

<https://youtu.be/6JutXjj07FY>



Page 430, January 18, 2018 Photograph Snow. All the remaining film was shot at one time from the third floor rear. There was heavy snow, the sky was bright

and clear. Stand develop with higher temperature and more agitation. Snow Contrast Increase.

Hardware: H16Rex4, Three lenses: 25 rex, 16mm Ar, and 10mm rex, N.D.0.6 +2 filter, 1/50 I measured two wide arms apart more film remaining and there was still even more than that that was shot and was ready to process. Good. Now I will develop a 25' piece then have the option to tweak the development differently.

Exposure: Light was 320 incident, I went outside to measure it with the Sekonic meter. The light setting was f16 + 1/3 -> f11 at 100 ASA. The weather is supposed to be in the 50s on Saturday and the snow will be gone. The sunlight wasn't as full on the rear buildings facing me at 11:30. They became brighter at 1:10, but no film remained by then. Most of the snow on the roofs was already melted off.

Development: as I did using RO9: higher temperature with more agitation. 78 degrees, 30 second agitation to start, no prewash soaking, 5 seconds agitation at the halfway times. I'll keep the same dilution at 1:100. Film was fully loaded onto the small Lomo tank. 1100 ml of 1:100 HC-110 is used. 1L of bleach and 1L of clear are needed. The white tub with a water bath to control the temperature is used with the small Lomo developing tank in it. The cooler holds and warms the bleach and clear in water.

First developing started with 25 one quarter rattling turn agitations done in 35 seconds. No presoak was done. Not doing so increases contrast some. Film was dry. One hour is the target, this time. Water temperature in the big white tub is monitored closely. The Lomo tank is not to float because that would cause added agitations. The overflow drain is just about correct in that regard once fluid is in the Lomo tank. As I add hot water excess drains out. The temperature was adjusted to 78 degrees and excess drained. The Lomo sat still.

Halfway through the first developing time, or after 30 minuets, agitation was 5 one quarter turns with rattling and that took 10 seconds. So, agitation is a little more than RO9 and temp is a little more, too, than I used on films stand developed in RO9 earlier.

After bleaching and clear were done, shadowy images on the film, the ghost images, looked stronger than usual. They were clearly seen.

The notes don't say but the second development must have been just like the first one. Agitation to start is missing, but I did 25 turns and rattles in 35 seconds then, so I probably did the same thing.

Agitation at the halfway point in the second development sequence was 6 rattles and 1/4 turns. No time was written. However long that took.

Results are that the lights are not clear on this film. I should expose more and or develop longer. Since I can't do more exposure, I'll have to develop longer. Perhaps cooler, too? Looks like contrast is greater. This film IS darker and denser than the previous one.

## 3K 7266

<https://youtu.be/Sa-utwcAloc>

Jan. 19th, 2018 Page 432 This is the long 3J exposure that was cut apart and developed differently, this part is 3K now. Develop 3J differently.



Hardware: H16Rex4, Three lenses: 25 rex, 16mm Ar, and 10mm rex, N.D.0.6 +2 filter, 1/50 I measured two wide arms apart more film remaining and there was still even more than that that was shot and was ready to process. Good. Now I will develop a 25' piece then have the option to tweak the development differently.

Exposure: Light was 320 incident, I went outside to measure it with the Sekonic meter. The light setting was f16 + 1/3 -> f11 at 100 ASA. The weather is

supposed to be in the 50s on Saturday and the snow will be gone. The sunlight wasn't as full on the rear buildings facing me at 11:30. They became brighter at 1:10, but no film remained by then. Most of the snow on the roofs was already melted off.

Developed in HC-110 1:100+ but at 75 degrees, two hours, 11ml in 1100ml water. No presoak. I think the second developer can be one hour.

The Lomo spool was at the middle rib, halfway, less than the previous one, 3J part 1. This is 3J part 2 or 3K since it is developed differently. Two hours not one hour in the first developer.

A water bath is used, but I'm only concerned about having the temperature over 68 degrees. 78 is too difficult to maintain during stand times as it cools off pretty fast. It looks like I'll have to warm it up every 15 minutes.

On the half hour I gave 3 agitations and warmed it back up to the mid 70s.

A longer than one hour first developer is being tried. Every 15 min I have to warm up water in the tub.

At one hour 3 agitations were given. 15ml of developer were used in 1200 ml of water. 2 hours long was the first developer time. 75 degrees was the average temperature. Bleach was 5 min, Clear was 3 minutes. The second developer was also 75 degrees, with 20 agitations to start then 3 on the half hour.

I think I got it right. The film looks good. The images are lighter and brighter.

So, 3i, 3J, and 3K have basically the same exposure but were developed differently. 3H & 3i are low and high contrast. 3J now has lower contrast because less contrast techniques were applied to it. 3K was pushed 2 hours in the first developer, the second developer was kept to only one hour.

Try hotter 2nd developer with more agitation. Better bracket first and learn what a proper exposure is, then increase contrast. 3iJK

Video was taken apart and made into 3 different ones

Jan 18, 2018 Page 430 3J. Brilliant sunlight and clear blue skies today. Heavy snow is on the ground. At 11:30 am there is strong side light and lots of



shadows. The Sekonic incident light meter read 320 centered on the high scale. Even more than yesterday! It just doesn't get much brighter than that here in Pittsburgh. I used a N.D. 0.6 filter at +2 stops more light. All the remaining film on this roll number 3 was exposed. I'd be kicking myself all next summer if I did not shoot these city landscapes today. The Bolex H16Rex4 camera at 1/50 and  $f16+1/3$  towards  $f11$  were used. Infinity focus was set on 3 lenses, 16 mm, 25 mm, 10 mm. I think I heard the film run out during the 10 mm shot. The reflex baffle was closed throughout and the side finder was used. Hand held pans and tilts were done slowly, assisted by the top of an open window to steady me. That is the last of my Tri-X

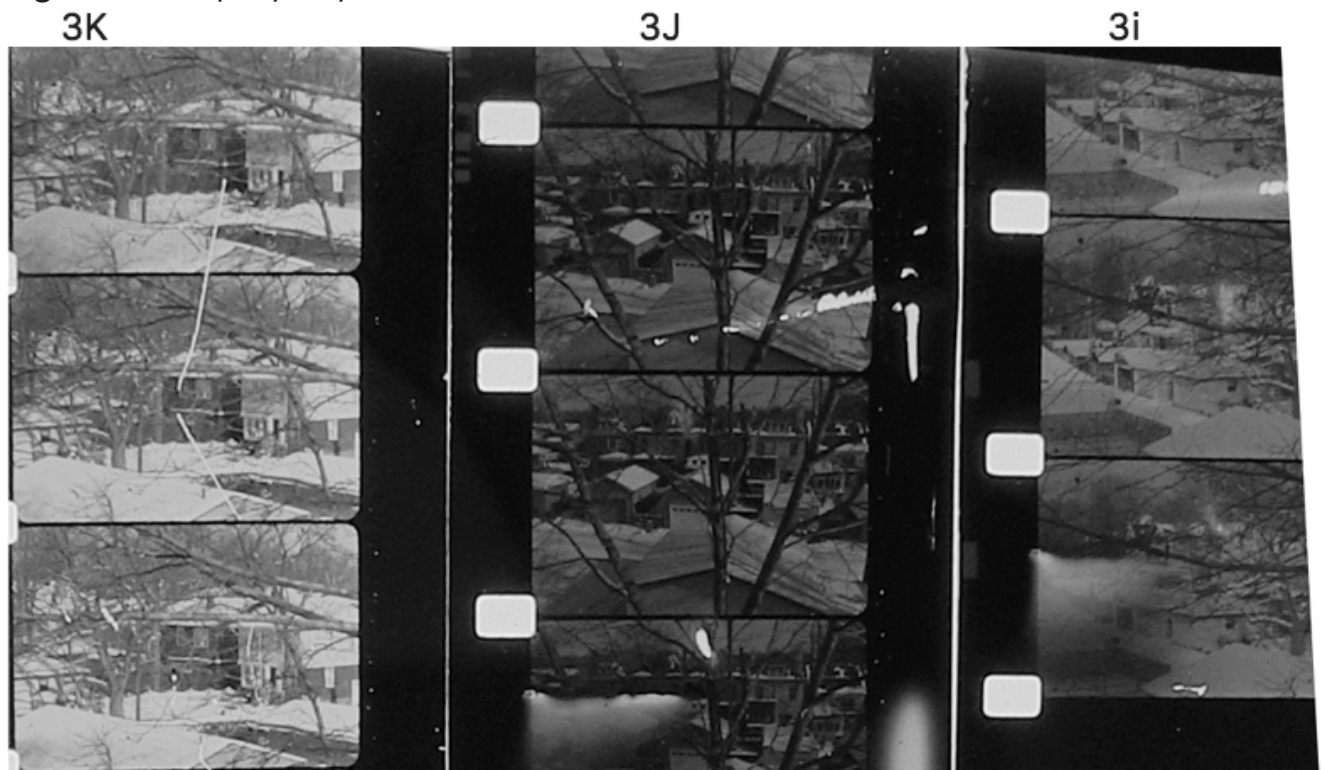
## 3iJK

Video was taken apart and made into 3 different ones

Jan 18, 2018 Page 430 3J. Brilliant sunlight and clear blue skies today. Heavy snow is on the ground. At 11:30 am there is strong side light and lots of shadows. The Sekonic incident light meter read 320 centered on the high scale. Even more than yesterday! It just doesn't get much brighter than that here in Pittsburgh. I used a N.D. 0.6 filter at +2 stops more light. All the remaining film on this roll number 3 was exposed. I'd be kicking myself all next summer if I did not shoot these city landscapes today. The Bolex H16Rex4 camera at 1/50 and f16+1/3 towards f11 were used. 100 ASA. Infinity focus was set on 3 lenses, 16 mm, 25 mm, 10 mm. I think I heard the film run out during the 10 mm shot. The reflex baffle was closed throughout and the side finder was used. Hand held pans and tilts were done slowly, assisted by the top of an open window to steady me. The developing method sets the ASA.

That is the last of my Tri-X

Right to Left, 3i, 3J, 3K



3J one hour both developments, 80 degrees, more agitation, no presoak

3K two hour first development, 75 degrees, normal agitation, no presoak

My goal is to use cheap easy to get developer. HC-110 looks good.

B&H has HC110 and free shipping over 49 dollars.

I do think it'll work on movie film now.

3K. I just saw results of a 2 hour stand first development with a 1 hour second development. I pushed it to see. Great! Exposures were off. This one is bright as day. And more heat and agitation increases contrast but the exposure has to be right first. The middle one had contrast increased with 80f, and more agitation, no presoak. The left one was pushed, two hours first developer, no presoak, normal agitation, 75f. The right one had low 68 degree f temp, presoaked 10 min, and little agitation. The left and middle ones are from the same shoot, they were exposed the same, the film was cut.

These were done in the smallest LOMO 25 foot tank. 1100 ml were used. All three have basically the same exposure. I should have bracketed first.

The last lightest one looks great projected. However, you can see from the clip above that it still could use some more contrast. It would look even better with more contrast. The developer was diluted 1:100.

Regarding Prof. Agar's YouTube video: <https://www.youtube.com/watch?v=OdpfRqDDZyw&t=318s> The sample of his father by the window is very interesting. Development was cut in half. I have not cut development yet because I do reversal. However, I lowered temperature and reduced agitation. That reduced contrast effectively. I will use those films to print copies on higher contrast film. Btw, the movie, Godfather II, has shots like the father by the window all through it.

3K is the light one. It was developed 2 hours. The 3J video is on this reel, however, the quality is low because of auto focus in the video camera. It has to be done over. Let it be said though that it needs more contrast.

## 4A 7266

<https://youtu.be/g1T-XdGsCc>

January 21, 2018 Page 437 Roll 4 test A of 7266 16mm was reversed in a bracket test using HC-110. The subject was my garage door seen from the second floor bathroom window straight back of my house.

H16Rex4, 25mm Som Berthiot lens, infinity focus, no filter, hand held, full wind, no spools, short film,

Weston and Sekonic meters at the door outside, overcast sky, whole stops between the brackets, 3 blank covered lens single frames were shot between each bracket, 2:30pm, f16, 11, 8, 5.6, 4, the speed was 16fps, The Weston Master IV reflected meter was used up close to my gray card garage door and gave a 25 foot candle reading. Very overcast today. The Sekonic incident was one stop higher at 40 on the high scale, but I did not shield it from overhead sky lighting. If I had shielded it the reading could have been the same. The f stop indicated was between f11 and f8 and that is fine with me according to what I saw the projected image to be. Closer to f11. The 1/50 was next to f11 towards f8 and not under f11 or in the middle between them.

HC-110 1:100+. 3.5ml in 300ml. Temperature was between 75 and 80 f. No pre soak was given to increase the contrast. Pre soaking reduces contrast. A water bath in an Igloo cooler was used to keep temperature pretty constant. Agitation was higher than usual, 20 inversions in 30 seconds to begin and 6 inversions at the half hour. One hour was developed for the first and one hour for the second developers.



f11

f8

f5.6

The reason 75 degrees or higher temperature was used was because those are the temperatures that were used earlier with RO9 in the summer.

Box speed is 200 ASA/ISO. That is just under f11 or on f11. I do not know. I have to project it to see what I like. And I like it bright, but not weak and thin and grainy. But overcast is dark and maybe that is what it is supposed to look like. Contrast or density is better at f11 than at f8, anyway.

Upon reviewing the projected film again, f8 and f5.6 look light. I like light. However, they also look thin. Even grainy. f16 looks too dark. So, I suppose f11+1/3 stop more light would be absolutely correct. Better conditions would make a better looking film. f11 looks fat or thick or just strong, not weak as do f8 and f5.6. I thought they could use more contrast or now what I call density.

**7266 Roll #4-A 16mm Reversed  
Stand developed in HC-110  
one hour, twice, at 77 degrees  
with 30 sec agitation to start  
then 10 seconds agitation at the half way times  
Light was 25 reflected from a gray card  
using a Weston Master IV light meter**

This would be worth making a long exposure at 200 ASA, 25 foot candles, Weston meter, f11+1/3 stop more light, 1/50.










## 4B 7266

<https://youtu.be/3Lpb0fFqpxU>

January 22, 2018 Page 439

7266 16mm Roll 4-B  
January 22, 2018  
Stand Developed in HC-110  
1:100, 80-82 degrees f, one hour, twice.  
30 agitations in 45 seconds  
then 10 agitations in 15 seconds  
on the half hour.  
The black leader is so black you can't hardly see through it.

My conclusion on the previous film was that the lighter shots needed more snap.

		
		
<p>All of these look good, none are weak or thin. I prefer the lighter end of them. Any could be used. Latitude was increased. 3&amp;4 are 200 &amp; 160 ASA</p>	<p>Increased agitation and temperature made the lightest shots useable, strong, fat or dense. 5,6,7 look best to my liking. 125, 100, 80 ASA.</p>	

Light was 25 again on the Weston light meter. All are strong and useable.

## 4C 2 7266

<https://youtu.be/oEexD-SArr8>

January 23, 2018 Page 442

Push the film in the first developer some, but not two hours worth. I used one and one half hours. Only the first developer. After projecting it I liked both #3 brackets. They are f5.6 and 5.6/4 or 250 and 200 asa. They are both lighter than the previous films.

My selections were made from the projected film. Video made it look lighter. They are lighter than previous films. Perhaps it is like my first traffic film that was developed 18 min instead of 14 or 16 and became lighter.

I do not know what the correct exposure should be other than what I like. A film could be shot under different lighting conditions, slating light levels for each shot, and sent to a professional lab to be developed. Then I could just copy each type of lighting exposure.

7266 16mm Roll 4C Jan. 23, 2018  
Light was 6.5 Weston off the door  
HC110 1:100 actually 3.5:300  
One and one half hours  
82 degrees f  
Agitated 30x in 45 sec to start  
then 10x in 15 sec half way  
one hour second develop  
selections were made when projected





f11, 11-8, 8, 8-5.6, **5.6**, **5.6-4**, 4, 2.8. f5.6 +1/3 is 200 asa

## 4D 7266

<https://youtu.be/-CcScEFZSj4>



Jan. 26, 2018 Page 447 What will stand HC-110 look like in bright sun? Just take what worked best in low light and try it in bright light. The view was left off the back porch and shows construction on a garage.

H16Rex4, 16fps, 2 spools, 1200 frames were shot.

Light was 320 incident and 400 Weston Gray Card at the tree propped up vertically. N.D.0.60, +2, f16. 200 Asa. f16-1/3 was indicated, I gave it more at f16. Weston was f16-2.

Developed in the small Lomo tank. 1300 frames fit the spirals. HC-110 was used at 1:100, 11ml in 1100ml, 82 degrees, Bleach and Clear bottles were laid in the white tub along with the tank. The first developer started with 35 agitations in 45 seconds. 10 agitations were given at the start of the second half hour. The temperature was kept over 80 degrees f every 15 minuets. Extra hot water is added to the tub and the excess drains away out the little hole. The Lomo tank doesn't float.

The first development was one and one half hours long. Bleach and Clear were saved to be reused again. They were used one time.

Re-exposure had been done by the 60 watt bulb by the sewing machine out in the cellar, 30 seconds per side. Ghost images were very strong after bleaching.

The second development was also 11ml in 1100ml started with 30 agitations in 45 seconds. 82 degrees, which cooled and had to be warmed up every 10 to 15 minuets. On the half hour 10 agitations were given in 15 seconds.

All right, the time is 4.40 pm and I am done. The film is drying. I took a peek and exposures looked great. The end of the film has a few black frames. I got all of it on the developing spiral.

Projected, it looked perfect!

The first shot of the man in the roof was focused wrong. 10 feet. The second was at infinity.

## 4E 7266

<https://youtu.be/3TVnrkUm7FI>

Jan. 31, 2018 Page 456... Measure light on snow. Make white look white. This experiment is to use the best method derived from developing 4D to photograph 25 feet on a similar day, using the same development method. However, this developer may be warmer.



**7266 4E Stand in HC-110  
1 1/2 hours 82 degrees +  
then one hour  
30 agitations in 45 sec then  
at half hours 10 agitations in 15 sec  
Feb. 2, 2018**

The H16 RX 4 was loaded with a take up spool. The frame counter was set to 75 frames. 1300 frames can fit onto the LOMO small tank, while 2146 frames can fit onto the LOMO medium tank. The N.D. was removed.



The day is overcast with snow thinly laid and details show in the lights. At eleven thirty AM clouds are variable and opening up. When a thick one was covering the sun, I took light readings outside at the door. Sekonic incident covered by a gray card was 40H, while the Weston was 25/50. Both meters gave me f11 -1/3 towards f16.

Around 2PM clouds may become uniform again. Light is changing too rapidly now to film and to be certain exposures will be correct. Much as I want to shoot some film now, I can't. The sun emerged when I stepped outside, then became dim again. An automatic lens is needed around noon. I need to eat lunch anyway.

The Weston light meter was used. A gray card read about 25 at arms length at the same angle as a view. Removed, the snowy lawn read 200. Snow is then +3 more stops, using reflected light.

Do not force the baffle open or closed on the Weston Master IV meter. It need not "CLICK" ever. Instead, simply pull down on the pin, and then push down on the hinge to lock it into place. Repeat that method in reversed order.

From my position, a reflected light reading of an overall snowy scene can be taken and 3 more stops exposure added to compensate. The light meter would make the white snow gray if not for the added light.

It is not just about getting detail in the lights. Lowering contrast does that. It is about getting an exposure that makes white white and not gray.

The Weston light meter was used from the back porch. 200 foot candles occurred, looking down at the grass, and looking straight out. Up was 400. 200 fc @ 200 ASA +3 stops = 25 1/50 f11+1/3 ->8. I tried it.

**Shot #1.** For a moment, light increased, so I used f11. Up is higher anyway. Starting at the door from the porch, using the 25mm Som Berthiot lens set on infinity, I shot 17 clicks, up, right, down, left, ending at the door again. Light may have diminished by the end. The frame counter was on 501 at the end.

**Shot #2.** From the bathroom 2nd floor, 6 clicks were shot, using the 16mm AR lens. The light was 100 fc and changed to 13, making f8 +1/3. A shade was on the 25mm lens next to the 16mm AR Yvar non Rx lens. The spring totally unwound. It was snowing. The shot was a pan left. The frame counter was 702.

This act of filmmaking is more fun than making reports.

21 windings were needed to reload the camera spring.

**Shot #3.** 3rd floor rear view. 10mm RX lens. 200 went to 25 giving f11+1/3. Frames used became 1128.

**Shot #4.** The view was changed to looking left from the 3rd floor rear. The 25mm Rex lens was used. 300 f.c. occurred f11+. The frame counter read 1292 at the end of the shot and I gave it a squirt to clear the gate. It increased to 1312.

Done, Cut, Process.

I need to do filming to keep in practice even if reports aren't done yet.

Film was cut off and put into a box. The camera was reloaded to a fresh take up spool and the counter was advanced to 75. It takes about that many frames to load onto a takeup spool.

Stand development was in HC-110. The big white tub was used with 82 degree water. 11ml of developer was put into 1100 ml of tap water. Bleach and clear bottles were put into the tub along with the Lomo tank. At the beginning of the first development the tank was agitated 32 times in 45 seconds. It is difficult to maintain the temperature as the tub is under the fan vent. Extra hot water is added to the tub every 10 minuets since the water cools rapidly. I made the temperature higher to keep it warmer, 86-88. It'll go down before it warms much of the developer bleach or clear.

At each half hour 10 agitations were made in 15 seconds. Temperatures were 82-85 degrees f.

PhotoFlow is now mixed using filtered water; 1/4 tsp is put into 2L of water. No spots have been seen using this method.

The first development was one and one half hours. The second development was one hour. Fix was 3 min.



I learned that:

my two light meters match when used correctly

snow is +3 stops

if the meter says f11-1/3 do not use f11

extra heat overexposes and pushes developing

one and one half hours first dev may be too long

80 degrees may be enough

I can read reflected light from snow and expose +3 correctly

the black leader is very black

the 10mm RX lens IS sharp in a slow pan

the 16mm AR looked good. Why?

The last shot was overexposed

1300 frames fit the small LOMO tank

300 f.c. is  $f11-1/3$  not  $f11+1/3$

strong ghost images are seen after bleaching

snowy days are low contrast when overcast

I should expose @ 200 ASA exactly as indicated, then work on time and temp  
more bleaching didn't do any more to the ghost images

Too hot, overexposed?, too long ? I projected it again and only looked at it. The video camera did overexpose it some. I saw detail in most of the snow. The last shot is overexposed some.

## 4F 7266

<https://youtu.be/Tf5AilB0i0w>

Feb. 3, 2018 Page 461 The sky was overcast, solid and consistent. The view was from the 3rd floor.



4F 7266 Stand Developed in HC-110  
1:100 at 80-82 degrees f  
Agitation was 30 times in 45 seconds to start  
then 10 times in 15 seconds on the half hours  
One hour twenty min first developer  
One hour second  
Minolta spot meter on the door was f8. I shot at f8.  
Weston was 25 up close, later

H16RX4, 1/50, 16 fps  
baffle closed, and  
infinity focus. Lenses  
used were 10mm RX,  
16mm AR, & the  
25mm RX.

Exposure: 1320 frames were shot. The Minolta Spot Meter was used on the garage door from the 3rd floor window. The reading was f8.

Some snow remains. Cold. I want to develop this film similarly to 4E only cooler. Maybe shorter? There isn't enough snow remaining to use the Weston meter from the window. I got 100 f.c. even with only some snow and +3 gave f8.

Going outside, the door read 25 up close with the Weston. That is 2/3 stops less, f11 +1/3. What to do?

According to the Weston, I overexposed again, only even more than yesterday, so, I'll underdevelop some.

Development: HC-110 was 11ml in 1100ml water, One hour and 20 minuets at 82 to 80 degrees. The tub, tank, and developer were made to be 82 degrees. 32 agitations in 45 seconds started it developing. Temperature was checked every 10 minuets. On the half hour 10 agitations were made in 15 seconds. The last section was only 20 min, not 30. Bleach and clear had been used two times already; this made three. Rinse with 40 agitations. Bleach 6 min, rinse, clear 3 min 30 sec. Agitations were 20 in 30 then 6 in 10 on 30 rinse, rinse. Re-expose to a 60W bare blue bulb 30 seconds to a side while turning the spirals. The second developer was HC-110 1:100 in 1100ml at 82 same way one hour. 10 agitations in 15 seconds at the start of the last half hour. Fix temperature was 68 degrees, lowered in washes, and was 3 min. long. Photo Flow was 1 min in filtered water. Filtered water got rid of water spots. 1/4 tsp in 2L Of fresh PhotoFlow. The 50 foot spiral was held vertically to load the dryer and that worked.

In the book, How to Reverse Movie Film, 1944, on Page 18 it says:

“Ordinarily, the length of the second exposure would be one of great importance, but since there is no emulsion left on the film except that which must be turned black, the length of the second exposure is unimportant.”

and on Page 20:

“Some control can be exercised, however, such as using a very soft developer to bring out a rather soft positive image, or a contrasty formula if more snap is



desired. But as a rule such corrections are made in the first developer...Development should be carried out until the film is completely black.”

I have been stand developing the second development. That is not needed. The blacks do not need the compensating effect of limiting dark deposits. On the contrary, you do want them to be dark. More agitation is applied to achieve it.

The second development should NOT be stand developed. Lights have already been compensated. It is the darks that need to be enhanced. So, continuous agitation and inspection of leader density is the way forward. A strong light should be just visible through the black leader, not so thick that it can hardly be seen. But I like it dark.

All of the film was on the take up reel. The small Lomo spiral was completely filled up. It came out even! Amazing. 4D was 80-82 degrees. 4E was 82-85 degrees. This was like 4D but with less time but I didn't know how much less to use. What went right?

15ml of developer were used to develop most of the film in the UPB 1-A tank. All of the first development and most of the second development used it. I dumped it out and mixed fresh just to make the process match more closely the other tests. However, the film had already darkened to dark gray the 2nd time. I thought it would get darker faster, but it did not. The one batch of developer may be enough for both developments. If you wait for it long enough.

Box speed of 200 ASA was achieved. The Sunny 16 Rule placed the heavily overcast lighting at f4 and 1/200, I shot at f8 and 1/50. Selenium worked. Freestyle says that it could be used at 1:40. I used 1:3. All three light meters gave the same reading. Earlier, 1300 frames filled the small LOMO tank. Now, 1500 frames didn't fill this UPB 1-A 50 foot tank. 2000 frames would. 2,146 exactly. Page 343. Loading leader was 64 frames. Use 70. End leader could be increased. Black leader became dark enough to almost obscure the ceiling light. Less first development time darkens reversal; more exposure lightens it. Mix up some D-95 for the second development and reuse it keeping records. What if I didn't stand develop the second developer? More time and agitation increases blacks, agitate more in the second developer. Use D-95.

The last shot of 4F was overexposed so I tried Selenium toning it 1:3 soaking 15 minuets and now it looks fine..

Freestyle says 1:40 wow. That may take a while. But it would make it cheap enough to use!



Silver is green

Selenium is purple

Just part of the end of the film was put onto a Jobo 110 reel and toned. 60ml of Selenium was mixed with 180ml of water, making 240 ml, enough to cover the 110 reel. The temperature was 56 at first but I warmed it up to 70.

It worked. I saw projected film go darker when a man went into the door of the white house across the way. That last shot had been too light, the door shot came before it and already looked fine. But, look at the dark spot at the upper right third in the silver image. It looks much less prominent in purple.

Later, the rest of the film was also toned. The twice toned end didn't get any darker.

## 5A Stand HC-110

<https://youtu.be/WEG ht65p2s>



Feb. 6, 2018 Page 464 Box speed was achieved on a heavily overcast day. 3rd floor view.

Hardware: H16 Rex 4, 10 rex, 16 AR, 25 rex, no filter, The open window top was used to steady my hand held shots.

Exposure: If the Sunny 16 Rule was applied this light level was f4. The film is 200 speed. My shutter speed is 1/50. 50, 100, 200 makes f8, what was used. F4, 5.6, 8. Very careful light meter readings were taken; all three meters were used.

Minolta spot meter from the 3rd floor was f5.6+9, Weston 13/25, Sekonic outside was 15H or 320/640 Low covered, Minolta up close outside downstairs was f5.6+6 to +9, Sekonic f8, Weston f8-, WOW. Very much alike.

Development: It is longer than 25 feet, developed in the medium sized Lomo.

1st half hour. 1500ml water + 15ml HC-110 were mixed and made 80-82 f. No pre soak was used because I want contrast. That lowers it. 30 agitations were made in 45 seconds to start. Considering that I may not have overexposed this film, the developing 1st time will be put back to 4E one and one half hours, but cooler at 80-82 not 85-88 .

2nd half hour. 10 agitations in 15 seconds. Increasing time increases contrast? Increasing time of the first developer lightens reversal film I already know.

3rd half hour. 10 agitations in 15 seconds. 80-82 f.

Bleach 1200ml both bottles nothing was added. It had been used three times and this made four. 6 min were given and clear went 3 1/2 minuets. Agitations were 20 to start then 6 every 30 seconds. Bleach and clear were used three times before this use, making four times. Very economical.

The second development was done in the saved first developer. It had been allowed to sit but the temperature was eventually raised to 82. The tank lid was off and constant agitation was given. After 5 min it was dark gray, after another 5 min it was just a little darker, so I dumped out the old developer, mixed a fresh batch of HC-110 15ml in 1500ml of tap water and tried that. 5 more minuets it was darker but not black. Lots of agitation was given. I wanted to use fresh developer like in the other tests. The old developer may have worked. The new didn't work any faster. Fix was what I normally have done, 3 min. Some of the variability in the film may come from fixer acting unevenly on the film. I did a test later and found that fixer will dissolve the images if it is very warm and it does so in a short time. Keep it at 68 degrees no more than a minuet and even dilute it some to prevent image from being eaten away!

Page 465. The camera was loaded after first setting the frame counter to 00 and 64 frames were used in spool loading. f8 was determined. The 3rd floor view was used. All 3 lenses were used, 10 rex, 16 AR, 25 rex. 1422 frames were shot, oops, too many. The open window top was used to steady my hand held shots. Leader was shot with the lens covered to make a total of 1500 frames.

The UPB 1-A tank would be used. Very little developer is used so why not?

7266 5A Feb. 6, 2018  
Stand developed in HC-110  
one and one half hours first developer  
30 agi in 45 sec then 10 in 15 at 30 min  
Second developer was also HC-110 but  
continuously agitated 30 min  
all temperatures were between 80 and 82 f  
This developer can be reused in 2nd if you want to wait for it

Save the first developer to use as the second developer Watch the second developer and look through the leader to see how dense it becomes. Agitate it continuously. Add more developer if need be. Stop developing when the film is dense to barely see a light bulb through it.

Film on the spiral didn't load properly. It had a kink about 1/3 the way out then it spiraled from there. The end was way out to the edge. Just made it. At 20 min film is darker not black. This is where D-95 or Dektol would work better. At 25 min the emulsion looked not black and I decided to have a look at the other side and at the light through the film. 30 min I looked. The light in the ceiling was dark and the shiny side was black. The emulsion was lighter gray. It could have been done earlier. I don't know.

I basically did the 4E test at 200 Asa changing the 2nd development to have lots more agitation in a shorter time. Much more leader is needed on the end. A lot of crap shows projected. That is because I had trouble loading the spiral and also loading the drying rack. This spiral behaves differently. I ended up holding it vertically or turned over to peel off the film. It may be best to load the rack from the top.

Projected it looked alright but I'd like more contrast. D-whatever?

## 5A Stand HC-110 Selenium Toned

[https://youtu.be/eaCgELGCo\\_s](https://youtu.be/eaCgELGCo_s)



Feb 13, 2018 Page 480 7266 16mm Stand developed in HC-110 was toned in 400ml Selenium with 120ml water half an hour at 20C or 68F.

This may need to be put into hypo clear after toning, I didn't yet, but it was washed thoroughly.

I got up in the middle of the night to do it...



## 5B 7266

<https://youtu.be/g6wXQz2ljil>



Feb. 9, 2018 Page 469  
Two hour stand bracket.  
Greater contrast or density  
is desired. Back porch view.

H16 Rex4, 10mm Rx,  
Sekonic incident meter, The  
shade was removed from  
the 25mm lens to avoid  
blocking the wide angle. 6  
feet of film, no spools

Light was 320+1 Low scale  
Overcast. 200 Asa 1/50  
16fps The red line on the  
light meter was on f 8 + 1/3

stop -> 5.6 and I exposed a bracket one stop above and one stop below. The  
light meter was uncovered and would have read lower if covered. f 5.6-1/3.

f 11 + 1/3	f 8 + 1/3	f 5.6 + 1/3
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HC-110, 3.5ml in 300ml tap water, 1:100, 80 - 82 degrees F, 2 hours both  
developments, 15 agitations to start then 3 inversions done slowly at the half  
hours, I had stretched my arms wide apart and got a 4" tail out of the spool, the  
can was kept in the Igloo cooler with heated water in it, the lid was kept on, the  
cooler was kept on a chair near the heater. If I agitate less in the 1st developer,  
the lights won't get as white; then, if I agitate more in the 2nd developer, the  
blacks will get darker. The developer was dumped out. Bleach and Clear were  
200ml each and saved for reuse. The 2nd developer was mixed fresh, 3.25ml in  
300ml tap water. 40 inversions in 1 minuet to start. 82 degrees. At the half hour  
20 agitations were done. Second hour of the 2nd developer got 20 inversions in  
30 seconds, still at 80-82 degrees. Last time was again 20 inversions in 30 sec.  
*Fixer was put into a beaker and into the Igloo to warm up, reticulation to avoid.*  
Time of the fix was 2 minuets, but warm. Could that be it? Yes. That was the

problem. The temperature was in the mid 70s for the PhotoFlow. A tiny fish tank air hose was used to measure 2 drops of PhotoFlow into 2 cups of filtered water.

This did not work. The leader was way too light. 3 exposures were had. Why was the leader so light? The fixer was too warm. I cut the end of the leader off, part was darker, put it into hot fixer and it became lighter than the light leader! Then, at 68 degrees, undiluted, it totally cleared raw film in 1 minuet.

The end of the light film with pictures was put into straight Selenium to soak a while and see if it would darken and how much. So was the hot fixed lightened leader. I could see the black edge got darker not more than a minuet. Oh yea! Big change here. The edges of the lightest end of the film actually became quite black!

All the film went onto a reel and into straight Selenium 15 minuets at 68 degrees room temperature. I saved the Selenium to use again. This film was Selenium Toned entirely.

After toning, the darkest exposure looks absolutely amazing under the magnifying glass! The tiny clipped leader end had darkened to almost what it had been before I hot fix bleached it. The film came out much darker, not enough, but enough to project and make some sense of it.



## 5C 7266

<https://youtu.be/2xQ8vfQUUzw>



Feb. 9, 2018 Page 472

Repeat 5B bracket, only with darker leaders. Porch with Marian's car. 3:15 PM

H16 Rex4, 10mm Rx, 1/50, Sekonic incident meter, The shade was let on the 25mm lens. 6 feet of film, no spools.

Overcast, 30 foot candles with the meter covered, 40 uncovered on the High Scale. 200 Asa. f 11. One half stop above and one half below it.

Three exposures, shorter takes of each so they fit properly.

Developed in HC-110 one and one-half hours first developer. Longer first developer lightens reversal film. 1:100, 30ml in 300ml tap water at 82 degrees f, 1st developer Agitation was 12 times in 30 seconds. Agitation was less than in 5B. On the half hour agitation was 3 inversions only. The third half hour had 3 inversions, also. Bleach and clear were cooler, like 75-77 degrees. The small amount used last time was used again. The film looked dark so a clip was put into more bleach to see if it would change any. That gray base is dark. The emulsion was light. It only became orange again, not lighter. Dumped out both.

2nd developer HC-110 3.5ml in 300ml, more developer, 82 degrees, Agitation was 40 times in one full minuet. At one hour lots of agitation, and I checked the leader. It looked solid black, only up at the light it was lighter than usual. Back into the tank, more agitation, 82 degrees, one hour. Agitation was at 15, 20 inversions, at 30 min. 20x, 40min 20x, 50min 20x, 60 done. Fixer was diluted 150ml fixer up to 240ml total with water, only 1 minuet long, at 68 degrees. Normal density in the leader.

I still want more contrast. Toned 20 minuets in straight Selenium.

**5C** f11 is the middle one and was indicated at 30 Red High Scale 1/50 200 Asa



## 5D 7266

<https://youtu.be/LjbaksXUhEc>



Feb. 11, 2018 Page 476 Develop less film in the same amount to see if it gets darker. 3' in 300ml. Use new bleach and clear. Pan tilt up left, 3rd floor.

H16 Rex4, 25mm Rx, 1/50, Minolta spot meter. No spools. 16fps, 200 Asa, one exposure. Overcast raining.

The Minolta spot meter read 5.6.1 from the third floor window off the door, my gray card garage man door. I shot at f 5.6.

1st Development was in HC-110 One and one half hours, 3ml in 300ml tap water at 80 to 82 degrees. 1st developer started with 20 inversions in 30 seconds. The Playmate Igloo cooler kept temperatures up. At the half hour 3 inversions were given. At one hour 3 more inversions. Washes cooled the film down to 68 degrees to bleach it. 150ml bleach 20 inversions 5 min 6 inversions at 30 seconds. Clear was 3 min with the same agitations. Both were mixed together and dumped out.

2nd Development was in HC-110, One and one half hour, 3ml in 300ml, 80-82, 40 agitations to start in 40 seconds, half hour 40 in 32 seconds, one hour 40 inversions slowly, one more half hour, then wash and lower the temperature to 68 degrees. Fixer was used straight, 69-70 degrees, 1 min, 3 agitations every 15 seconds, in 180 ml of fixer. The film leader is almost opaque. It was toned 20 minuets in straight Selenium.



## 5E 7266 Cine Kodak Royal interior

<https://youtu.be/HK99le97J3I>

March 6, 2018. Page 488 Interior, HC-110 Stand trial.



Cine Kodak Royal camera, 50 foot magazine, 25mm lens, 1300 frames of new 7266 single perforated film were loaded, the pressure plate was upside down and the double perf gears were bypassed. 7 foot focus by tape. Same distance was on the lamps so they are out of focus.

All the lights were on. Some daylight was still in the windows. Early evening. f 1.9 wide open. 16 fps.

Developed by reversal all in one afternoon and evening. HC-110 was used by the stand method. Only 22ml of it was needed to process this 25 foot long test.

Results: The mag made a big scratch. Pictures look dark here but they project wonderfully nice and bright. Details are seen in the lamp shades and darks are black. Focus was spot on between us.

Here are the details: New 7266 film was run through the Bolex H16Rex4 camera first. Frames were counted to just under 1300 and then the film was cut on the feed side and run all the way out onto the takeup spool. My Handy Dandy spool loader device was used to wind up the film on a core. The brass retaining ring was used. The film in the 100 foot spool was put onto the small black rewind.

Loading the magazine was harder than I thought it would be, but I did it. A shoe box lid was used so that nothing would get lost in the dark.



The pressure plate in the magazine was flipped over; the long part sticking out was on the top with the gate on the left. I bent it down more. Screws were tightened with the lights on.

The smallest Lomo tank was used. I did not know how well this would work, if at all. I didn't want to waste much film and chemicals. I did want to try my latest developing scheme indoors under low light and compare it to the other ones I'd shot under the same conditions. Pavan Deep inspired me to try and use the mag.

Notes had been made on small papers about temperatures and agitation details used in Stand developing films. 5A was used as a starting method, although, I do not understand why. I must have been in a hurry. That was a snowy dull day film. I wrote these developing notes on the back of it. A new sheet was also made. It is titled, James and Me.

11ml of HC-110 was put into 1100ml of filtered water. The temperature was raised to 82 degrees F. An old coffee pot held the water from the frig and was heated some on the stove. That saved some time and worked well.

First developer was 1 1/2 hours long. 82 degrees. 80 to 84 in the white tub.

Agitation was 45 X in 60 sec to start 30 X in 30 sec half way and 20 X in 30 sec

Washing the film cooled it off to 70 degrees

Bleach was old so I gave it 6 minuets normal agitations of 20 X in 30, 10 X in 10

Clear was old and 4 minuets

Re-exposure was at a 60 Watt blue bulb, 30 sec per side plus a few flips

Second developer was mixed the same way as the first developer, new

Second developer was 1 hour long

Agitation was 55 X in 60 sec then 30 X in 30 at 20 min, 30 X in 30 at 40

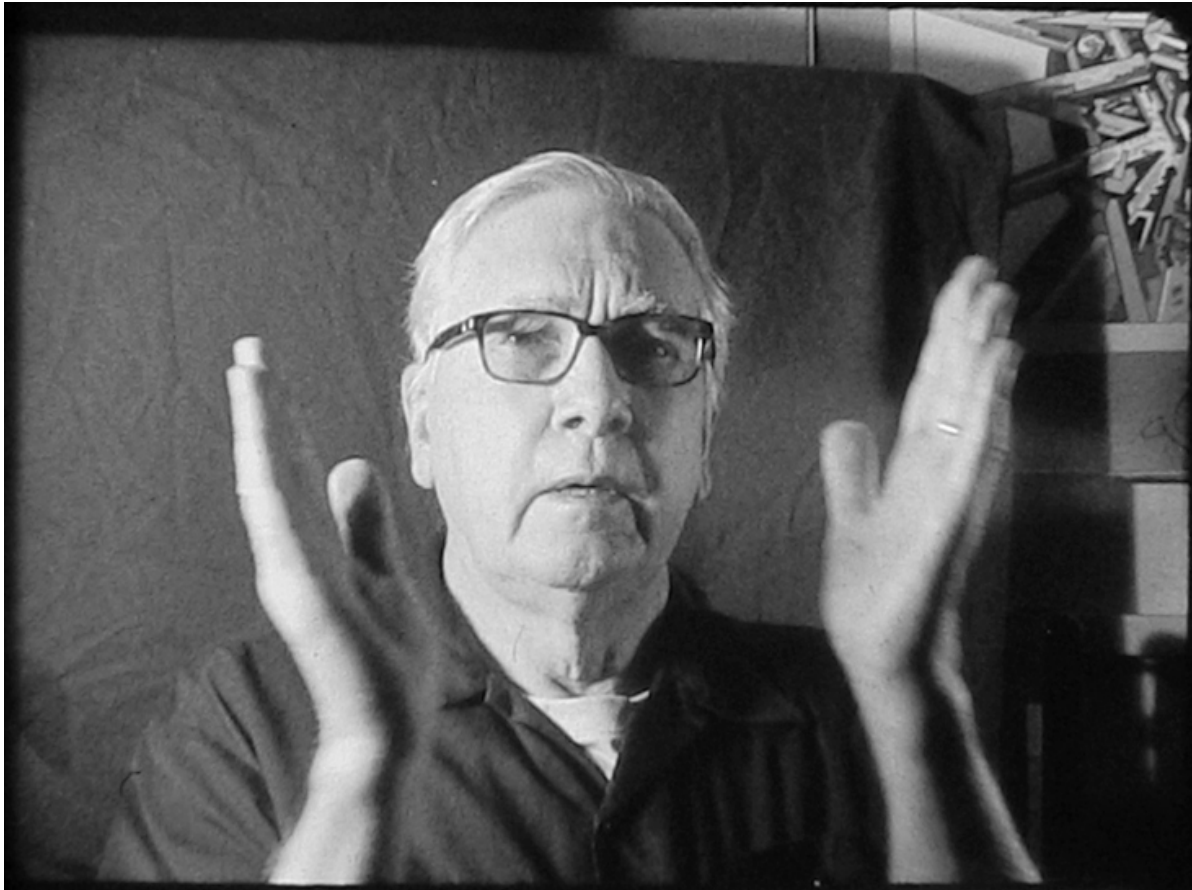
Cooled off in washes

Fix was 2 minuets at 70 degrees

Photo Flow was 1/4 tsp in 2 Liters of Filtered water.

No spots occur that way.

## 7A Poem



### 7A Poem 01 06 rough cut

<https://youtu.be/sQZynLI3FIA>

March 23, 2018 A friend of mine sent me this birthday poem. I read it, filmed it with the H16RX4 and the 25mm Som Berthiot RX lens, onto 16mm 7266 reversal film, recorded audio at the same time with a Zoom H4N Pro on audio level 40 in Stamina mode, developed it in the Lomo Pro 100 for the first time, developed it in HC-110 at 1:100, one and one half hours, 84 degrees, with a minuet of agitation each place, and used a video camera to record from the projected film. The video camera went out of focus at the end. The film is fine. I have to record it again. Final Cut Pro was used to sync the film images and the audio. My Facebook page hosts two stanzas that are uncut and the audio is much longer as are the pictures, which include clapping and sitting down and getting up inbetween shots to wind the camera over and over again.

by James Franzen, March 18, 2018

This day marks your birthing day,  
the count of decades plus some years,  
of walking here on this earth's ways  
through smiles and sometimes tears.

What is it now that lies ahead?  
That which we can't really know.  
Mostly sunshine? mostly shadow?  
Drops of rain and flakes of snow?

God is way up there in heaven.  
He's here on earth and in outer space.  
He's also beyond all limits  
but with us in all the things we face.

He enters into your being  
and into your heart and your brain,  
giving you his grand promise,  
life with him, the ultimate gain

The years of that life  
have an infinite count  
They are filled with grandest joy,  
the view from the top of the mount.

What grandeur can equal  
the day of birthing into his place,  
the ways and signs of that time,  
there seeing him face to face.

# RO9 Normal Developing New Film, not stand developed.

1A a 7266 & 1A b 7266

<https://youtu.be/28Adup4kG34> <https://youtu.be/9Cf5nQMDTyQ>



Sept 19, 2017 Page 255

I wanted to see if RO9 and Dichromate bleach worked on new 7266 film.

H16T, Red Filter +3, Cable Release, Mitchell Tripod, loose film feed, spool takeup, 1/40, 25mm Switar

Light was 320-1, A different bracket was tried. A loop of exposures were tried from f22 to f1.5 and back again but I ran out of film. No

spaces were put in-between shots. Both ends would have been the same. F22, 16, 11, 8, 5.6, 4, 2.8, 2, 1.5, 2, 2.8, 4, 5.6, 8 exposures loop continuously.

22	16	11	8	5.6	4	2.8	2	1.4
one	two	three	four	five	six	seven	eight	nine

32 ASA

This was developed in RO9 1:25 at 75 degrees f room temperature 18 min. Room temperature was 75 degrees f of tap water and bottled chemicals. 20 inversions to start, 3 every 30 sec and 3 taps. 12ml RO9 in 300ml water. Bleach was 5 min clear 3 re-exposed to a bare bulb in the cellar 30 sec each side. Bleached film was gray, lighter on the other side. The film base is gray.

The developing method that worked on 10 year old Tri-X 16mm 7266 was used and applied to brand new fresh 7266 film. The idea was to find the best exposures when projected. That was determined to be between f8 and f5.6. The developing temperature was 75 degrees which is quite warm. The normal temperature to use is 68 degrees. Further tests, rolls 1:CDI, with normal developing follow at the lower temperature. 1:ACDI were all normal, not stand, developed.

The light meter was used without covering it. If I had covered it the reading would be lower. The Red filter may be a +2 1/2. Both of those things change the ASA.

I think I marked f5.6 as looking the best projected, or f8.

**1B** was STAND developed so it is not in this section

## 1C 7266

<https://www.youtube.com/watch?v=M-QRj4zTrB8>

Sep. 21, 2017 Page 263 Try a longer time at 68 degrees. Left off back porch.

**New Tri-X 7266 16mm Reversal  
RO9, 1:25, 68 degrees, 22 minuets, twice  
Potassium Dichromate Bleach  
320, 1/40, 16 fps, H16T, Red Filter, 25mm Switar**



45 ASA

H16T, foot attached, red filter, 16fps, 1/40, 25mm Switar lens, The camera was set on the railing on the back porch as it has a big foot on it.

Light was 320, f16, 11, 8, 5.6, 4, 2.8

Development was in RO9, 1:25, 68 degrees f, 22 minuets, twice,

The temperature was lower than 1A and 1B, They were 75 & 76 degrees. These little images look too dark. f 5.6 to f8 looks good projected. That is an increase. Try this again. Look at the film projected and on the light box to compare with the other one developed shorter.



## 1D a 7266    1D b 7266

<https://www.youtube.com/watch?v=NAwh7NI14LE> Audio commentary

<https://www.youtube.com/watch?v=j4IVmHvAcmw> Titled slow motion

Tri-X new 16mm Kodak 7266 film  
320 foot candles, deep red filter, 1/40,  
RO9, 1:25, 68 F, 30 min, Dichromate Bleach  
  
The video camera works better in a lit room

Page 265, September 22, 2017, 320 light centered, H16T, 1/40, 16fps, Red Filter,  
Clouds, Hand held,

11	11-8	8	8-5.6	5.6	5.6-4	4
1	2	3	4	5	6	7

I waited for clouds, then sat in the chair and hand held the camera and shot 2-3 seconds, putting a couple blanks in-between shots, covering the lens.

68 degrees is the same as the previous roll, 1C, so is RO9, and 1:25. The difference will be the length of time in the developer. Agitation was applied. The temperature rose during processing and had to be adjusted late. That made the film darker than it would have been if kept at 68 degrees consistently.

The end of the film was cut to a point. Film went into the slot in the spool easier after I trimmed the end.

I counted 2-3 seconds during each shot and then added a few blank frames inbetween each shot.

Page 266. My arms were locked wide apart, measuring film length. The head was hold punched and trimmed. 68 degrees is the same as the previous roll, 1C, so, is 1:25 and of course RO9...



f 4 was way too light. The room has some light in it and that kept the video camera from loosing focus, so, these images look a bit washed out.

...the difference will be the length of time in the developer. 22 min increased to 30 minuets. Unlike stand development, agitation will be applied in 30 second intervals.

I want to see two things. Will the clouds show clearly with buildings lit properly? And is the Asa higher than 32? Is the properly exposed part projected closer to f8? f8 is 50 ASA.

A temperature check was made at the halfway mark. It rose to 74. I lowered it in three minuets back to 68. Plastic takes a long time to transmit heat.

A water bath will be needed to control the temperature. I used one on the first stand development I did, using double 8mm film.

The temperature rose 2 degrees in 10 minuets. I put the jug back into the ice water for the last 2 minuets of developing time remaining.

The second development temperature was monitored much closer, like, every 5 minuets.

The length was about 8" too long.

Clouds rendered beautifully.

## 1A 1C 1D

<https://youtu.be/hnmZNABJGwc> Jan 3, 2018



September 26, 2017 Page 273 Normal processing Best Exposures.



1A

1C

1D





1A Review 1A on page 255. +3 had been used with the red filter, but use 2 1/2. #5 looked best, then I projected the loop over and over and dotted the exposure numbers that looked best. f4 had it. The lights look overexposed here even so. Longer films are needed, spacers between shots can be gray to avoid flash frames caused by black spacers, closer differences can be used, use 1/3 stops, I can easily see those. They are hard to make but are clearly seen.

Manual mode on the video camera is best to use. That way flashes do not happen and spacer frames would not effect the iris.



1C f4 number 5 exposure. This has more contrast than 1A. Lights are not as overexposed.

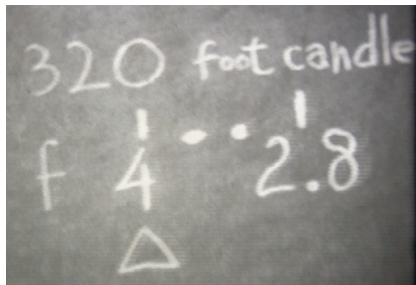




1D f4-5.6

1i 7266

<https://youtu.be/mbp6miNXixg>



Sep 27, 2017 Page 279 This is a tilt focus pull of fences left off the back porch. It is a repeat of a method that worked earlier, 1C, which I copied. A red filter was used. I was happy with these results.

I just wanted something that worked.



Normal Processing. Not Stand. This time, I put a short piece of masking tape inside the take up spool with another piece facing up on the right side. Film is pressed onto the up tape.

H16T, Red filter +3, 25mm Switar, trigger grip handle, 6 feet of film. Copy 1C. Exposure: 12 Asa, 320 f4. Light was 320-1 this time, f4+1/3 ->2.8. By the time I was ready to film light had improved to 320 so f4 was used. A focus pull was performed.

Developed in RO9 1:25 at 68 degrees in 22 minuets with Dichromate bleach.

The Jobo small tank was precooled, 20 inversions started development, I forgot to keep measuring the temperature but it was ok after 10 min and then again in 10 more.

I need want a solid repeatable base. In bright sun, one developing method that gives me great clouds. I gotta start somewhere.

PhotoFlow didn't suds up when I used 1/2 tsp in 1000 ml water.



There is too much camera movement and too slow of a camera speed to get clear video still frames. 24 frames per second and a much slower camera tilt would be better. But it looks great.





Nice

# Paranol

1J 7266

<https://youtu.be/nNpEs5BLPXs>

Page 280. September 27-28, 2017. Posted Jan 4, 2018



This beautiful weather can't last. Bright sunlight, blue skies, fluffy white clouds, that is a dream for me to evaluate exposures. Light was 320 on the left side. Brackets were done: f16, 11, 8, 5.6, 4, 2.8. The title slate was f5.6 in sunlight. The H16T, Red filter, trigger grip, 16 fps, 1/40. Paranol 1:25 68 degrees 22 minuets. I want to see a push increase in film speed. The tank was precooled. The can was cooled on 15, 10, and on 5. Handle the can by the black. Avoid the orange. Bleached 5, Cleared 3, but, Fix was 10?! The video is missing.



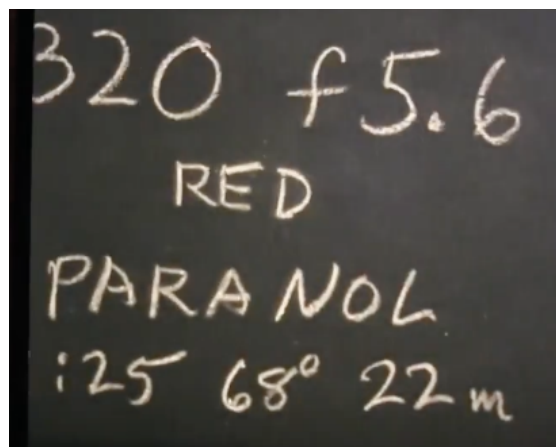
## 1K 7266

<https://youtu.be/WCHUmXB3ufU>

Page 284, September 28, 2017

7266 1K  
Page 284 September 28, 2017  
Developed along with 7266 1L  
in Paranol 1:25 68f 22 min

Tight tilt down and partly back up again of the fences, clouds, and plant as seen off the back porch looking left. This film has the slate.



September 28, 2018 Page 284 One exposure. Reversed. The previous test did show tree leaves nicely at f5.6. It was worth a try. I had to wait for the sun to come out. It did, but since it had rained, the light was a little brighter, 320+. That alone will make this test more successful. The view was left off the back porch. No focus pull. f5.6 with focus at infinity for all.

Because the light became brighter, I tried again.

## 1L 7266

<https://youtu.be/OVaHEmkhdlw>

7266 1L  
September 28, 2017 Page 284  
This was developed with 7266 1K  
Paranol 1:25 68 f 22 min reversed  
320 +1 light  
f 5.6 -1/3 stop towards f8 was used

Tilt down and back up again of fences and the plant outside off the back porch. All one exposure. Big fluffy clouds show really nicely. The sky is dark behind them.



f 5.6 -1/3 ->8 was used in brighter light 320+1. I hope. It may have dimmed. I dunno. This was processed along with the 1K film in one tank.

Water drops were on the bracket test. I still hadn't figured out how much Photo Flow to use. But it wasn't so much the chemical as the water. Filtered water works great. And I use 1/4 tsp per Liter.

A bracket between f4 and f5.6 in 1/3 stops is needed to really determine the exact setting.

Paranol can't be much better than 1/2 a stop faster than RO9 if any at all.

I wanted a faster ASA.

## 1M 7266

[https://youtu.be/Mg\\_VgxMTMJk](https://youtu.be/Mg_VgxMTMJk). A Close Bracket between f 4 and f 5.6 in thirds.

7266 1M  
Page 285, Sep. 28, 2017  
I chose f4 - one  
that is 12 asa  
f4, f4-1/3, f4-2/3, f5.6



The view is the left corner house roof with trees and cloud.

Only one screen capture was made because it is very difficult to see any difference between the brackets.

Light was 320 only in one direction so I went for it. There are blanks between the shots. f4 was first. It is the lightest. The sky gets better and better with less exposure.

The red filter lightened the building. It has red brick on it.

Paranol, 1:25, 68, 22 minuets, twice.

This test was a great success. Projected, f5.6 is too dark, while, f4 is too light. I

couldn't choose between the remaining two exposures.

I was trying to figure out the ASA based on the light and the exposure. Definitely not box speed of 200 Asa. Move the Asa dial to put the shutter speed onto the exposure you like. 320 +3 is 40 on the high scale. That is f16-1/3. Move the Asa dial over to put 1/40 on f4-2/3. One click below 25. Not very fast.

Looks good though.

## 1o 7266

<https://www.youtube.com/watch?v=vuiufC7LyP8>

1N was chewed up and trashed

Sep 29, 2017 Page 286 Tri-X 7266 Reversal 16mm new film was developed in Paranol the same way with the same light a different film was exposed at of the same subject to see which one was different. No difference. RO9 and Paranol are the same to me.

This is a tilt down with the focus set at infinity throughout. The subject is seen left off the back porch. It goes lower and much more of the plant is seen.



The tank had to be cooled again frequently. I did lock arms wide this length.

Note: RO9 and Paranol develop 7266 at 10 ASA using a red filter in bright 320 foot candle of light

# D-19

## 2A 7266

<https://youtu.be/X49Psq5i0kc>

Oct 21, 2017 Page 347 and 349 It was time to try developing Tri-X Reversal 16mm 7266 in D-19

This is a bracket test. The next test is to be shot in 1/3 steps f11 to f16 which will establish the exposure index.

7266 2A Reversed in D-19  
D-19 straight, 70 degrees F, 7 minuets  
Light was between 80 and 160 High Scale  
f 22, 16, 11, 8, 5.6  
Projected f16 to 11 looked best.  
F11 -1/3 stop would be box speed  
an Orange filter was used +2 stops



A takeup spool was used. 6 feet of film was measured off. 200 ASA was used. The view was from the third floor rear of the tree slice.

Bleach was 150 ml, used, then mixed together with clear and dumped out. D-19 was 250 ml, 70 degrees, 7 minuets. Fix was 4 minuets.

The leader is so very black I can barely see a light bulb through it up close. f22 is too dark.

The first developer was saved and used as the second developer which was at 4 minuets.

f 22 was too dark. f 16 OK, f 11 lighter. f 8 too light. f 5.6 way too light.

f 16 has it. 320 Asa.



New 7266 film was developed in new D-19. The developer came from Photographers Formulary.

The view was from the 3rd floor rear. Tree Removal was going on. Light was dim sunlight at between 80 and 160 on the High scale. 6' of film was loaded by stretching my arms wide apart in the dark. The H16T camera was used with the 25mm Switar lens and a different filter. The O2 filter was used. The O has a defect on it. O2 is darker. I used +2, not 1 1/2 as with the previous filter in 7222 12. f11 was the target. I need to use a piece of leader on the take up spool. Make shorter shots. 2 sec each only. 7266 is 200 daylight and 160 Tungsten. I used the black peg handle, hand held the camera, and shot single frames inbetween the shots with the lens covered.

Development was in new D-19, at 70 degrees, for 7 minuets. The developer was saved. No stop bath was used, it was washed with water. Bleach was 5 min using less than 300 ml. Clear was new also and less than 300 was used. Both chemicals were mixed together and drained. Doing that was new for me. ReExposure used the ceiling light in the darkroom. 150 ml more than covers the bottom reel in the Jobo tank.

Second Development was 4 minuets and it used the left over first developer again. Wash, fix 4 min. Wash 5 times, Photo Flow, finger wipe hanging off a paper clip stuck in the ceiling.

Project it and choose an exposure, then, expose another 6' strip in 1/3 stops above and below the chosen one. Use 2 seconds each shot. Use 3 single blank frames inbetween shots.

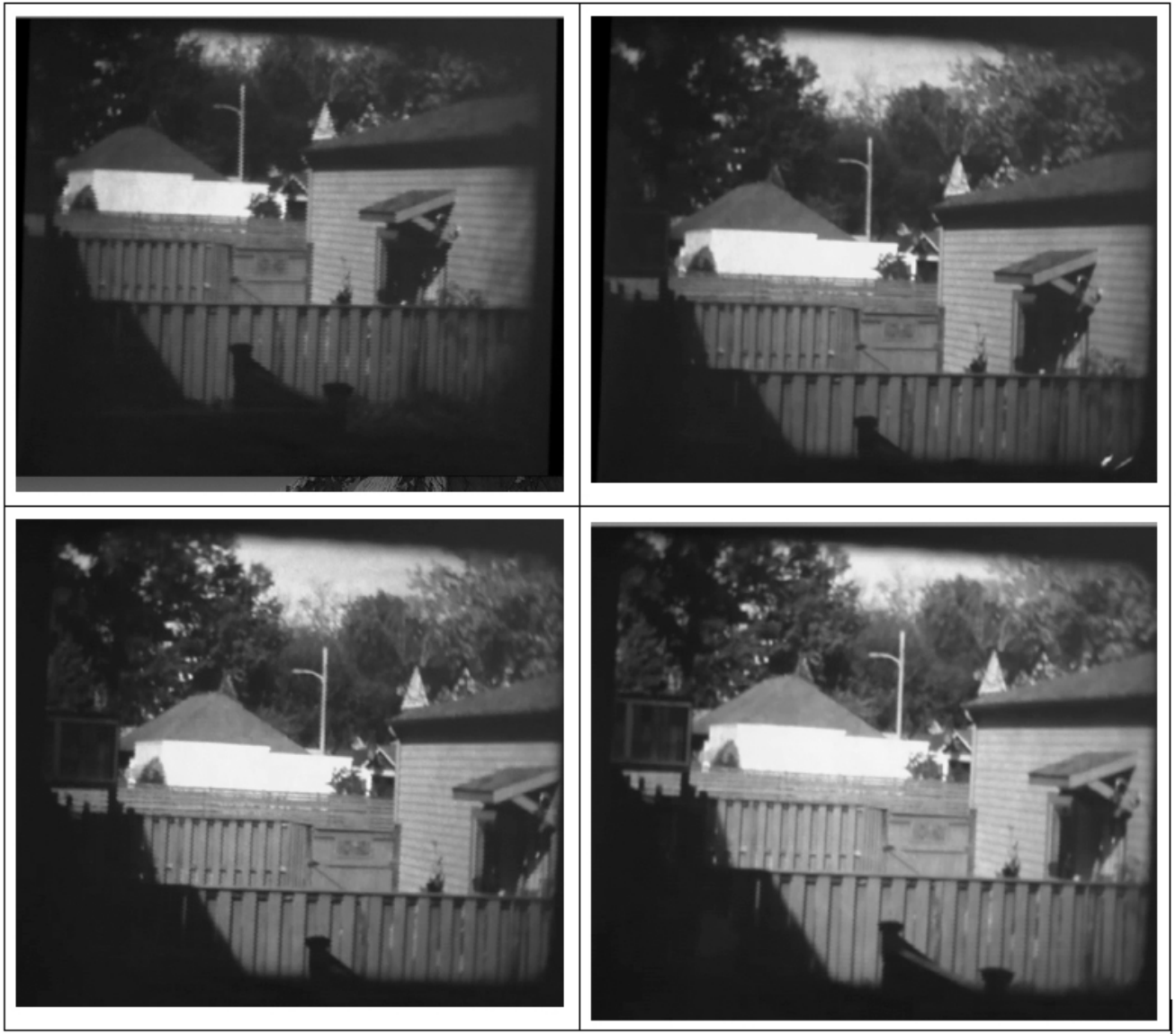
## 2B 7266

[https://youtu.be/G\\_uvJS0w2B8](https://youtu.be/G_uvJS0w2B8)

7266 2B  
16mm 1/40 Orange 2 filter (+2 stops)  
160+1 light  
Optimum exposure looks good at +2/3  
or f16 +1/3 stop  
in this sunlit scene



October 22, 2017 Page 350 The light level was 160+1, an orange filter was used with 2 extra stops exposure. The scratch marks mark the beginning and end of the loop which has the same exposure f 22 + 1/3 stop, and then it's +2/3, and f16, then **f 16 +1**, and then it goes backwards. The film was developed in D-19 straight, 70 degrees, for 7 minuets, no stop bath, water wash. The second development was 4 minuets in left over first developer.



Projected, I marked f 16 -1/3 or f 22 +2/3 the bottom left picture. 320 Asa.

Page 250. Oct. 22, 2018. Close Brackets, four of them. Box speed is achieved. The view was looking left off the back porch. 2-3 seconds each were filmed with 3 blank frames inbetween each.

Light was rather pale. I read it straight back off the back porch and a little to the left. I wanted to photograph the houses without the big tree as seen from the 2nd floor bathroom window, but then I turned left and shot these brackets instead. The light reading may have been, what, less? It looked like more 160+1. The lightest looks best. Perhaps it WAS darker?

It has to be repeated. The one third stop exposure differences are readily discernible, clearly seen, obvious.

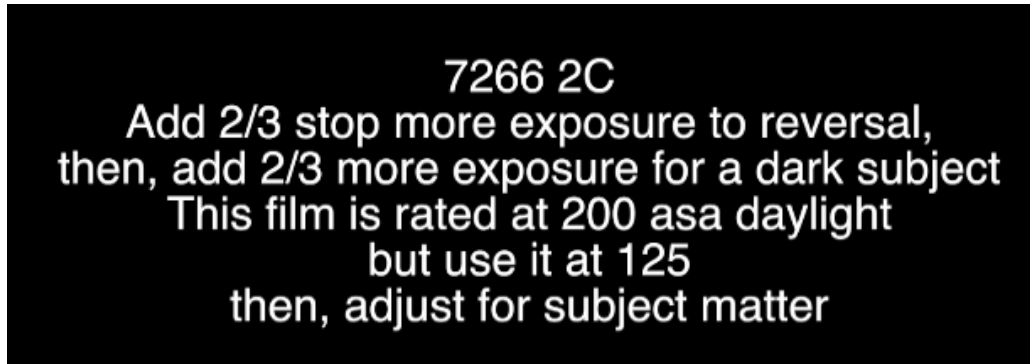
No matter how you read the light meter, covered or not, not as in this case, the Asa is higher than box speed.

## 2C 7266

<https://youtu.be/NX7EAx4dgQk>

Oct 30, 2017 Page 351 I am getting closer to figuring out the exposure index.

A gray overcast day close bracket study was made in order to determine the ideal EI. I determined that reversal film should be overexposed 2/3 stop then adjusted to the subject matter. (subject to review)





One, two, three, four. The film is new 7266 Tri-X reversal 16mm. This is roll 2 C. It was shot in October 23, 2017. It's a dull day close bracket study. The light level was half way between 40 and 80 on the high scale (Sekonic incident light meter). I shot 1/3 stop increases between f16 and f11. So it's 16, 16+a third, sixteen plus two thirds, f11. F eleven looked best (projected). No filter was used, 25mm Switar lens, 1/40th of a second. It was developed in D-19 70 degrees 7 minuets with a water wash and a 4 minuets second development using... (fresh 250ml).



If I had covered the dome on the light meter, the reading would have been even darker than 20-40. When the meter is close to 20, in that case the ASA at f11 is 200. But I hadn't learned to cover the meter yet. Feb. 21, 2018, I tested it outside on a similarly dull rainy day and it does lower if covered. It goes up tilted, too.

Oct. 23, 2017 Page 351 Dull Day Close Brackets. Light was between 40 l 80 on the High Scale of the Sekonic Studio Deluxe II Model L-398M incident light meter, using the dome, (uncovered). Weather was gray, rainy, and overcast. 200 Asa. The target was 1/3 stop less or above f16 towards f22, but my latest experience was to add exposure. So, I began at f16 or 1/3 stop more light. 1/40...

Note: I don't know why or how I got that reading. 20-40 isn't f16+1/3 at 200 Asa. It is f 11 -1/3 towards f16. Or better yet, f 16 + 2/3 stops towards f11.

...No Filter. 25mm Switar lens. H16T

The camera speed may not be accurate to 1/40. It was changed then put back on 16. (I think I had measured it and set it as accurately as I could earlier, but then moved it again, before this film was made).

Development was in D-19. 70 degrees. 290 ml. 7 minuets.

Water wash, no stop bath, 2X wash, Bleach 150 ml 5 min, clear 150 ml 3 min.

Re-exposure was 30 seconds each side 1 foot from the ceiling light in the darkroom.

oops: I didn't save the first developer and used fresh D-19 250 ml the second developer. (the audio is incorrect).

Fixer was in 250 ml 4 min. followed by an Ilford wash 5X.

Projected, the lightest exposure looked best

Develop 10 min, not 7 next time.

## 2D 7266

[https://youtu.be/coviN11a\\_cl](https://youtu.be/coviN11a_cl)

Oct 24, 2017 Page 352 Hot Developer. D-19 was at 74 degrees f 7 min. #5 looked best and was f11 + 1/3 stop open more. 40 H foot candles. H16T 1/40 sec.



Light was 20 H so I made coffee. A break in the clouds made 40 H so I shot. The Sekonic incident light meter was uncovered. 200 Asa, 1/40, H16T, 25mm Switar lens, No Filter. If it were covered, 5 is box speed at 20 foot candles.

1	2	3	4	5
f 16	16+1/3	16+2/3	11	11+1/3

Then, as I shot light dropped, ending at 40-1. Not much. But I only had a brief chance to photograph. I wanted to get close to yesterday's conditions of light and



raise the temperature of the developer today. I saved the 1st developer for the 2nd developing. The developed film looks way too dark. But I like it now.



2D f16, 16+1/3, 16+2/3, 11, 11+1/3  
40H foot candles uncovered, 20 covered.  
1/40, 25mm Switar, H16T, D19 at 7 minuets.  
200 Asa, first developer used as second 4  
min. water wash, not stop bath, fix 4 min.  
Ilford wash,  
I like how the lights by the garage door show  
so clearly even in the last shot.

Dull day, hot developer.

October 24, 2017, Page 352

## 2E 7266

<https://www.youtube.com/watch?v=C78HYSknGGk>



Oct. 24, 2017 Page 353 Longer Time Developing. Light was 40H (uncovered) 200Ase No filter 25mm lens H16T 1/40 16fps.

1	2	3	4	5
f 16	16+1/3	16+2/3	11	<b>11+1/3</b>

Developed at 70 degrees D-19 in 260ml for 10 minuets reused the developer 4 min no stop bath water wash fix 4 min. I tried to push it, but lowered temperature.D-19 70 degrees for 10 minuets. #5 looked best. f11 + 1/3 more light. H16T, 1/40





200 Asa 40H foot candles (uncovered)  
 25mm Switar, H16T, 16fps, 1/40, No Filter,  
 Longer time first developer, 10 minuets,  
 Lower temperature 70 degrees  
 D-19, first developer was reused in second  
 4 minuets, water wash, no stop bath  
 4 minuets fixer.  
 I tried to push the film but lowered the  
 temperature so it didn't work. Longer first  
 developing will eventually lighten the  
 reversed film and push happens. This looks  
 better regardless.

## 2F 7266

<https://youtu.be/NvayvcwYwql>



Oct. 27, 2017 Page 359 For reversal processing, some people use readily available Kodak D-19 as the first and second developer, instead of mixing Kodak's D-94 and D-95 formulas. Others have used Kodak Dektol (including myself). Any high contrast, fast acting developer is a good candidate. Some have also used Agfa Rodinal, which tends to be very grainy but sharp.

Tri-X 7266 200 Asa 16mm film. This is the 7 min bracket test.

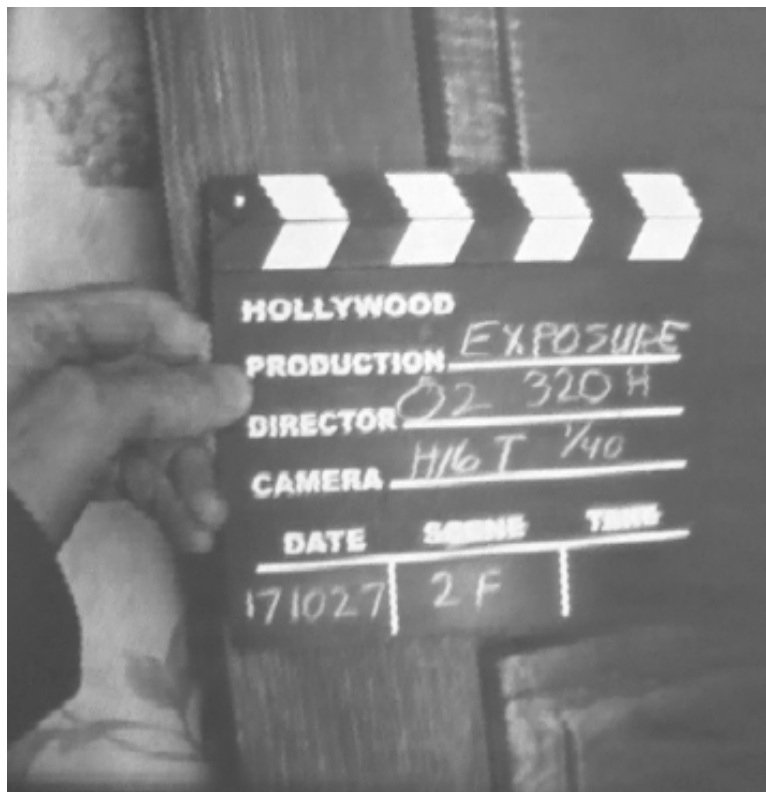
16mm is being tested with D-19. I want to gain control over the exposure, projected. The brightest sun was available at my back to a new view across the alley, but without the giant tree. Sob. Light was 320 foot candles incident reading. A different filter, darker Orange, a +2, was used. 200 Asa just made it on f22. The lens was opened in 1/3 stops from there. It is remarkable how clearly differences are seen between 1/3 stops. 6 different exposures were made and one for the slate. That came out perfectly exposed in a guesstimate of f5.6 light reflected from the buildings was 160+1 block on the low scale without the filter. I was inside the house away from the sunlight outside. All of the landscape exposures looked good at first. After watching the loop project for a while, the f22 looked a little dark, as if it were exposed for the sky, which it was, I suppose. The last two, f16+1/3 and +2/3, showed the light buildings breaking up while the shadows got lighter. Overexposure is better than underexposure. The incident reading is already kind of underexposed. D-19, 70 F, 7 min then 4 min, reusing the first developer. The darkest shadows never did get any lighter but the mid tone

shadows did. Blacks are intense. Shots are short with black frames in-between which plays havoc with my video camera trying to record off the projector screen! so I didn't record it. Gray card slugs would work better. I am learning to adjust incident exposures according to subject matter and not just to Asa. It is slowly starting to make sense.

Sunlight was the brightest it gets, 320. Orange +2 filter was used. Exposures were f22, +1/3, +2/3, 16, +1/3, +2/3. 200 Asa



Reversal film is dark if less light is used and it gets lighter as exposures are increased. So, f22 is dark and f8 is light. 2D&E were developed hotter and longer. Both methods made the films darker.



This slate was exposed by the open window in the second floor rear, the bathroom. It was in the shade in the house and the light level was only 160+1 block on the low scale. No filter was used at f5.6 and 200 Asa. Not bad. Looks right enough.

A old Rex 10mm Switar lens was used. I hadn't bought the new non Rex lens yet.

10mm RX, Orange Filter +2.

f 22, +1/3, +2/3, f 16, +1/3, +2/3





f 22, +1/3, +2/3, f 16, +1/3, +2/3

## 2G 7266

<https://youtu.be/tq9mstHxpOg>

Oct 31, 2017 Page 361 The light level was 40 on the High scale, overcast, cloudy. One continuous film strip was exposed at one setting on the slate. Then it was cut into three parts.

Each part was developed a different time.

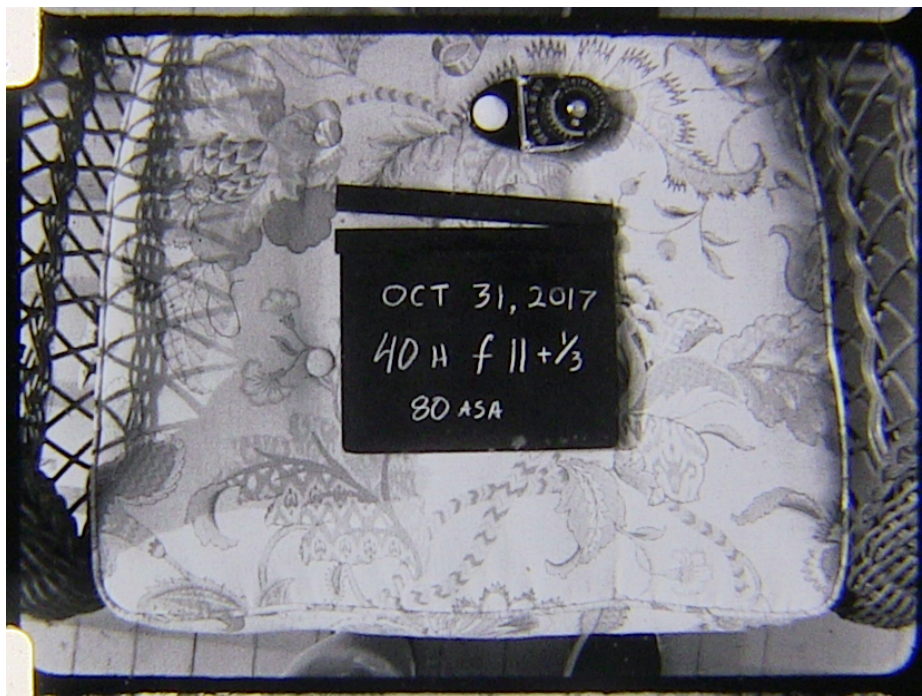
D-19 1:0 70 degrees was used 4, 7, and 20 minuets.

Projected, the 7 min one would be correct based on previous tests.

2G was spliced back together today, Dec 9, 2017, projected, videoed, and edited. The first clip, which was developed 4 min, is a little darker than the second 7 min clip, which I call normal development. The third clip is much lighter because it was developed 20 minuets. Less light would darken it.

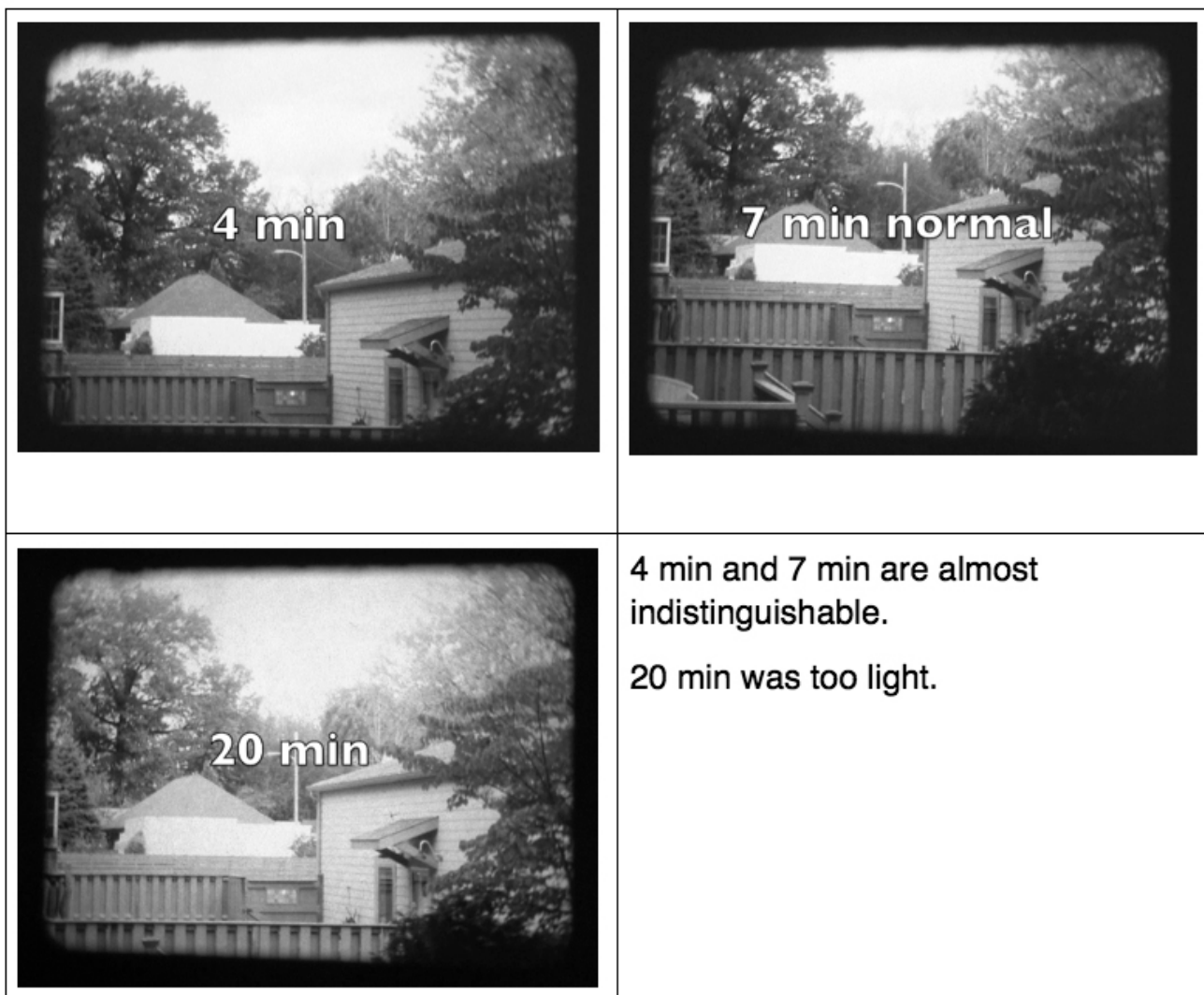
7266 2G stills from it are on Facebook, Search on 2G. One 6 ft long exposure was cut into three pieces, then developed 4 min, 7 min, and 20 min long. I had to prove to myself that longer first development would lighten the reversed image. It did.

Photographs were taken again today, Dec 9.



So, if I did more, in the same light, I would bracket between 11 and 22 then develop 20 min. One would project best. It would be a push development.





Light was 40 H. Left fences, hand held, 25mm Switar, no filter, all one exposure,  $f11+1/3$ , but I don't know how I arrived at that setting. If the meter had been covered it would give that at 20 foot candles and 200 Asa. This is basically the same exposure as 2CDF. The film was cut into thirds and each was developed individually. The normal exposure, at 7 minuets, came out lighter with 13 more minuets developing time added to it, making 20 minuets in all.

That was a successful push.

The first and second ones projected look so much alike you cannot even see them change one to the other.

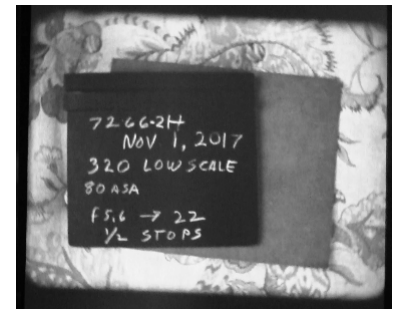
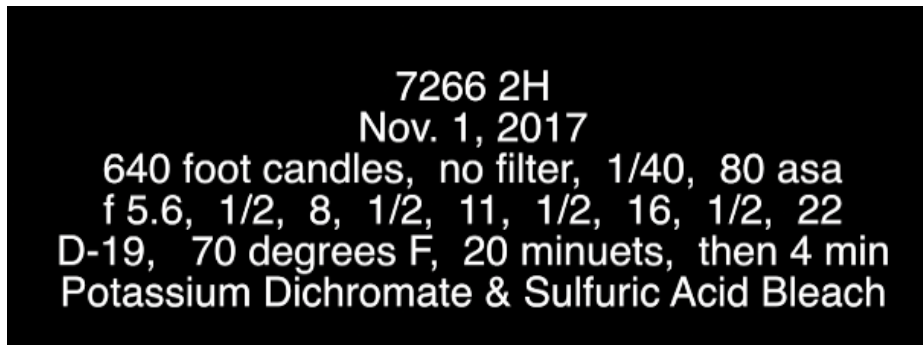
## 2H 7266

<https://youtu.be/ViEYrwN0S9M>

Nov 1, 2017 Page 362 Push Process Test in D-19

Light was 320-640 low scale, Bracket in half steps, the slate on the film was at the start, 1/40, H16T, Use single frame gray card slugs to help video transfers, it was raining slightly, no filter was used, 25mm Switar lens. It got lighter at end.

I set the Sekonic 398 between 320-640 on the black low scale, then twisted 1/40 to be over top f11. The Asa became 400



Development was in D-19, 1:0 straight, at 70 degrees F, for 20 minuets again. That was the first developer. 300ml were used. I had to heat the developer and the can. I did temperature checks every few minuets.

New bleach was mixed and 250ml were used 5 minuets. New Clear, too, 3 min.

The second developer was the saved first developer used 4 minuets.

There are nine shots done in half steps between f22 and f5.6

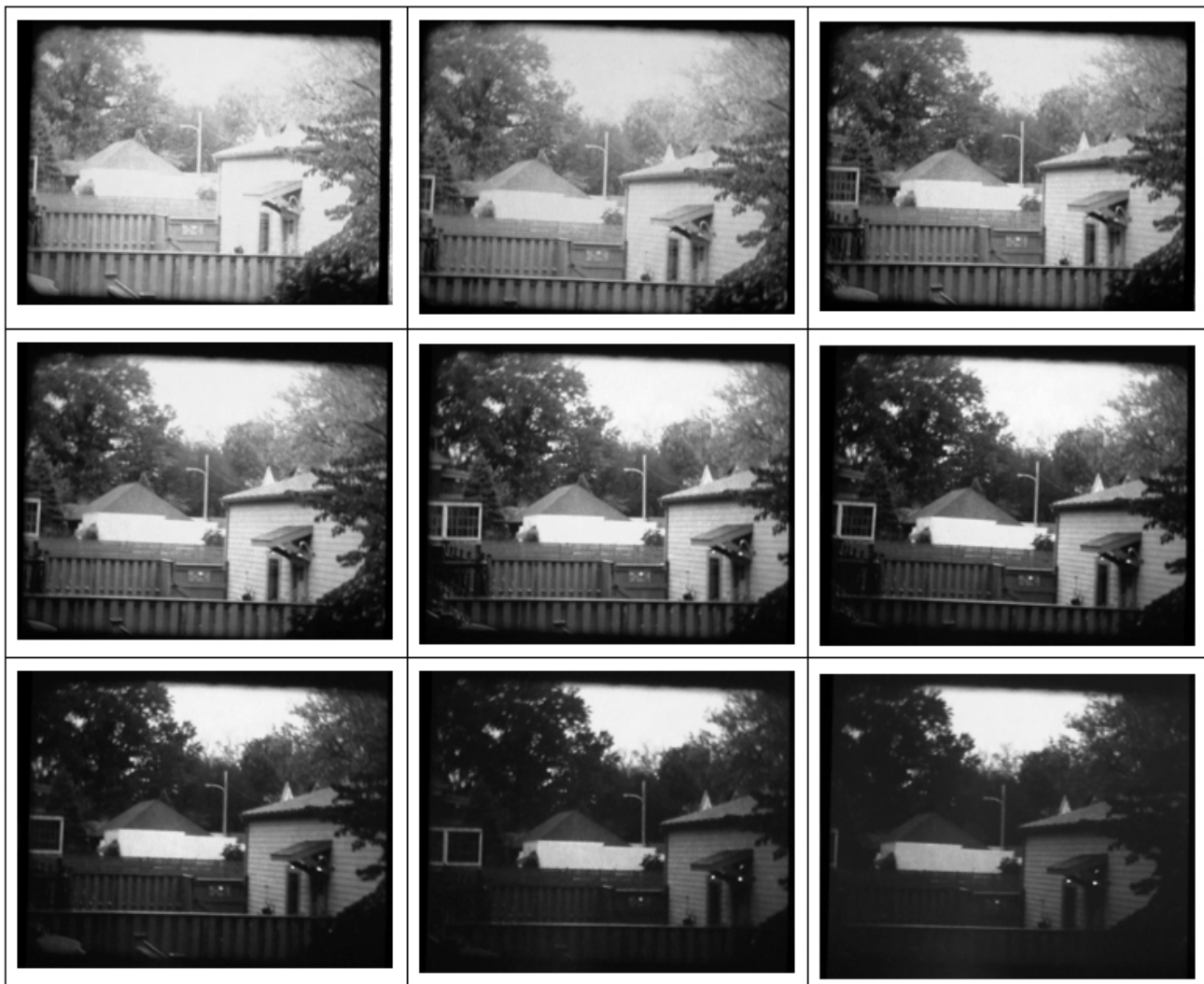
When I began, light was 320 low, but when I ended, the light was 640 low.

2H 7266 16mm 320-640 low scale foot candles, f5.6 to f22 in half steps, 1/40

Reversed in D-19 straight, 70 degrees, 20 minuets, reused developer 4 minuets, no stop bath, water wash, Fix 4 minuets. The Sekonic incident light meter was uncovered. f11 is the center image. That would make it 400 asa. Raining.

This page was copied then made without any of the color.

2H 7266 16mm 320-640 low scale foot candles, f5.6 to f22 in half steps, 1/40



Reversed in D-19 straight, 70 degrees, 20 minuets, reused developer 4 minuets, no stop bath, water wash, Fix 4 minuets. The Sekonic incident light meter was uncovered. f11 is the center image. That would make it 400 asa. Raining.

Lights were on next to the door on the garage so they should show some.

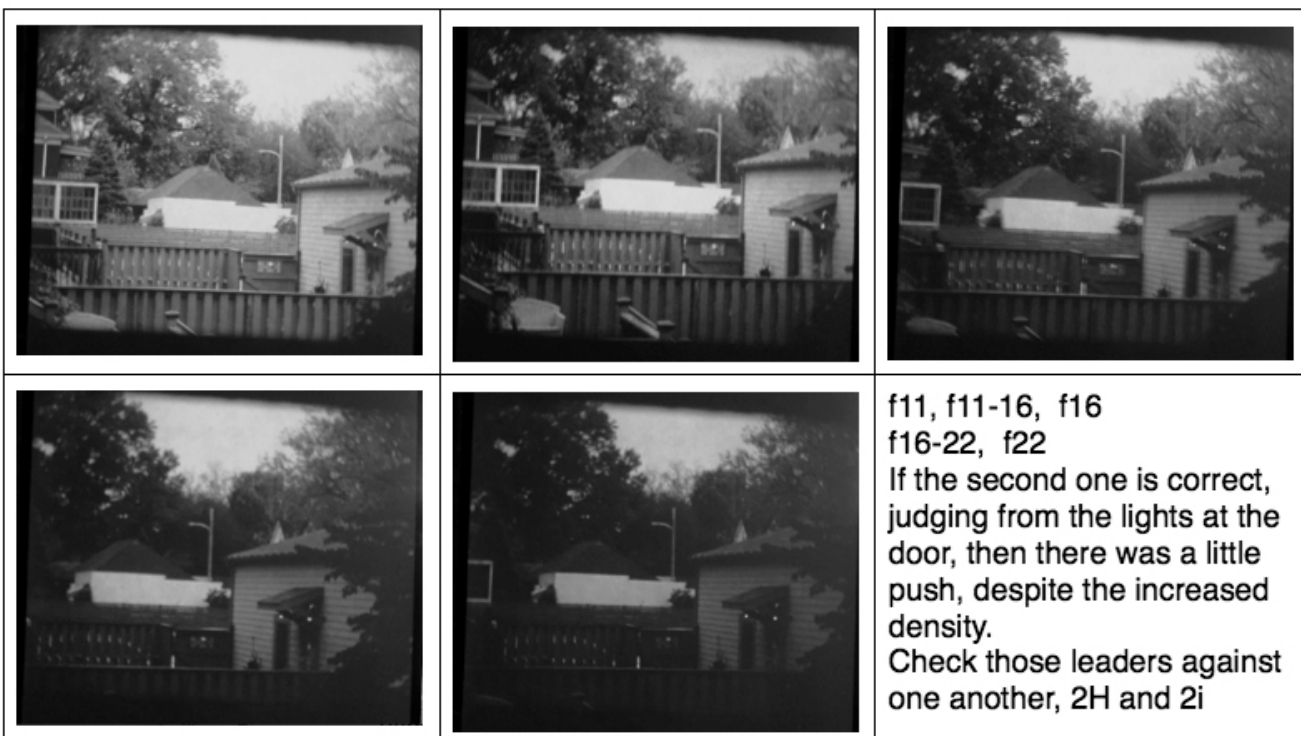
## 2i 7266

<https://www.youtube.com/watch?v=NJghkRUWedw>

7266 2 i  
Nov 3, 2017  
Light was 640 on the low scale incident reading  
Developed in D-19, 30 min, 1:0, 72 on average F  
It was too hot and had to be cooled down as it developed  
f11, 1/2, 16, 1/2, 22  
1 2 3 4 5



Nov 3, 2017 Page 364 Try a longer time and a little warmer.  
H16T, No filter, 25mm Switar, 1/40th,  
Developed in D-19, straight, 30 minuets. The first 5 minuets were way too  
warm at 76 degrees. I cooled it and by 8 minuets it was 71. The can was  
heated too much at first. At 25 minuets the temperature was 70.



I think the high temperature at first changed how the developing went. This is not as light as 2H. The high temperature made the film darker. Box speed. f11-1/3 may work. That's an even greater push, but nowhere near 2H. Do this again sometime at a more controlled temperature. Lower. Slugs were the sidewalk then the porch floor and that helped.



# Table of D-19

H16T + 7266 in D-19 1:10									
2A	80/160 H	Orange 2	f 22	16	(11)	8	5.6	70°	7 min
2B	160+1	O2	f 22	16	16	22		70°	7 min
			1	2	3	4	5	6	7
2C	40/80	—	f 16		(11)	(8)		70°	7 min
2D	40 H	—	f 16		11	(8)		74°	7 min
2E	40 H	—	f 16		11	(8)		70°	10 min
2F	320 H	O2	22	16				70°	7 min
1, 2G	40 H	—	f 11	(8)				70°	4 min
2, 2G	40 H	—	11 + 1/3					70°	7 min
3, 2G	40 H	—	11 + 1/3					70°	30 min
PUSHED 2H	320/640	—	5.6	8	(11)	16	22	70°	20 min
2I	640 LOW	—	(f 11)	16	22	7.6	hot at start	72°	30 min
2J	int. 20 low	LQR	f 1.5	1:10				75°	20 min

# LQR

## 2J 7266 interior

<https://youtu.be/16y6AhkODMw>

Nov 22, 2017 Page 377. Interior Low Light

I finally did a test indoors. I didn't rotate the lens back to the taking position after focusing it. The camera is non reflex.

Indoors. Push. Lenses wide open. f1.5 or f1.9. H16T, 1/40,  
New developing method. LQR 1:10 20 minuets and 9 minuets at 75 degrees F  
Fixed only 3 minuets

I did something wrong but it may be the camera???

My mistake, the camera is fine, I exposed film while the lens was in the focusing position, not at the gate. It is a non reflex camera.

7266 2J Nov. 22, 2017  
H16T at 16 fps  
25mm Switar f1.5 and 50mm Elgeet f1.9  
Lenses were wide open  
Developer was LQR 1:10 at 75 F 20 minuets  
second development was 9 min  
developer was used twice  
Light was 20 at my seat at the table

The Igloo cooler was used to keep the temperature up. 75 degree water was in it. Lid closed.

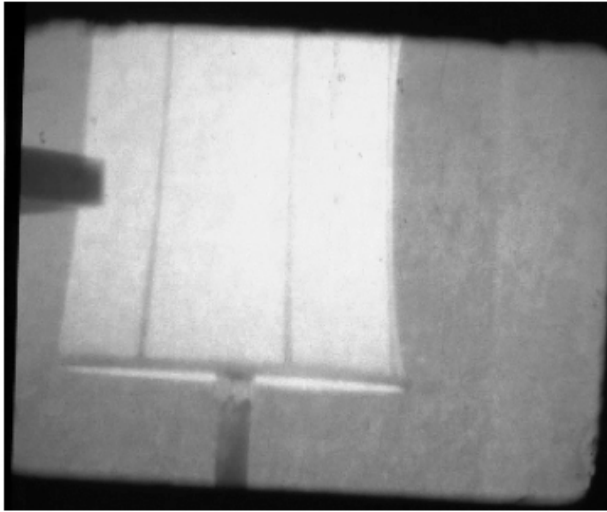
100 asa 25mm

200 asa 50mm

I didn't want to mix more D-19 so I used LQR instead. 10mm, 25mm, and 50mm lenses were used. The 50 was the Elgeet lens. All were used wide open. I tried to focus. It was difficult to see well enough to do it.

Light at my seat at the table, far left corner, was 20+ foot candles, and that is about the correct exposure.

These images are only brown because of the color balance of the video camera. The bulb in the projector is warm incandescent.



## 2K 7266 int B

<https://youtu.be/-R6kSW9y8RE>

Nov 22, 2017 Page 377. Interior, second try.

Push processing extreme. Less light, more time, hotter developer. H16T. 16 fps. 1/40. light on the computer was between 40/80. Outside it was overcast and 640 +1 block. Light on the notebook was 10/20. Lenses were wide open f1.5 or 1.9.

The title at the end should say light on the computer was 40/80 and on the notebook 10/20

Extreme push processing. The black leader turned out to be half as black as on 7266 2J. Too much pushing was done.

Could the developer have exhausted what with the extended time and increased temperature? 6 feet in 300 ml isn't enough I think to do that. The 1st developer was reused as it was in the previous roll. So maybe. Or, did the silver get used up and there wasn't enough remaining to make solid blacks? Test, test, test, repeat to verify...

If I printed the dark shot of the front room, more could be gotten out of it. Reversal film may be printed on reversal film. Exposure may be increased in dark originals to "push" more out of the film.

It would be interesting to see two films side by side on a light table, or projected one after the other, of the same scene developed using D-19 and D-94. Would 7266 be lighter with D-94?

7266 2K Nov. 21, 2017  
H16T 16fps 1/40  
Light on the computer was between 10/20  
LQR 1:10 at 78 degrees F for 30 minuets  
9 min second development  
I reused the first developer



Too much pushing was done.



# D-94 D-95

2L 7266

<https://youtu.be/kxeA7y9orJg>

Nov 29, 2017. Page 380. One exposure in D-94/5 and bright sunlight

16mm Tri-X Reversal 7266. Developed in D-94 two minuets at 68 degrees F or 20 Degrees C, followed by a stop bath. Potassium Dichromate bleach five min. then re-exposed to a light at 30 seconds per side. 2nd development was D-95 at 3 minuets. Fix was 3 minuets.

A test clip turned black instantly in the D-94, amazing!

The first three houses are all orangish or reddish brick and the orange filter lightened them. The fourth house is white. Next time I will use a green filter to retain the darkness of the brick. As the second house is orange it is lighter than the white fourth house.

7266 2L Nov 29, 2017  
H16T, 1/40, Orange filter +2, 16 fps, 25mm Switar  
160 high scale  
200 ASA, f16/11, 1/2 stop more light  
Developed in D-94 two min with stop bath  
and later in D-95 3 min  
fixing was 3 minuets  
20 degrees C or 68 degrees F



My exposure was too light. Don't add light. I don't like the Orange filter, use a green one instead. They will darken the bricks.

## 2M & 2J 7266

<https://youtu.be/MeWFzi2Md7Y> Shows D-94 and LQR developers.

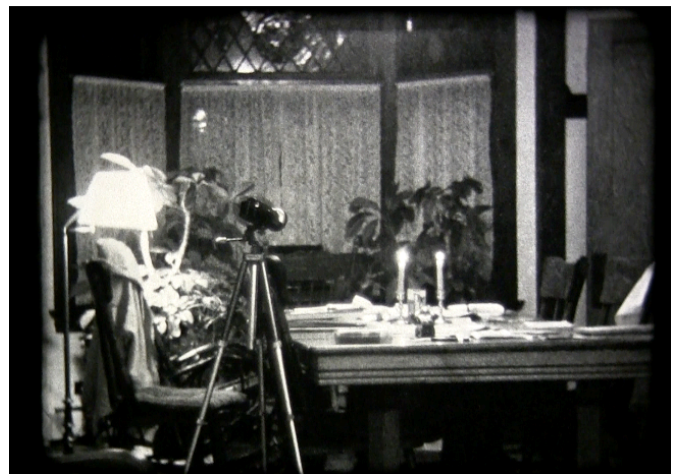
7266 2M Nov 30, 2017  
developed in D-94 and D-95  
two and three minuets  
with a stop bath 68 F  
10mm and 25mm lenses were f1.9  
Light was 20 on the low scale

Nov. 30, 2017 Page 382

Compare this developer to the previous one. Interior.

H16T, 10mm, 25mm, f1.5

16fps, 1/40 All the lights and candles were on. I focused as best as I could. Light was 20.



Developed using D-94 two min. and D-95. at 3 min. A stop bath was used, 68 degrees, Fix 3 min.

They are a little blurry but otherwise look great! You can see the difference clearly from that which was developed with LQR. 2 min verses 20 min. Big difference there. Now if I could get the focus correct...Do you see how the lights are blown out? Detail is lost in the lamp shade because D-94 pushes the film some. Next time I will close the

lens some more, or develop less. The interior lights were the same as were the wide open lenses in both instances. Or it could be the silver solvent.

## 2N 7266

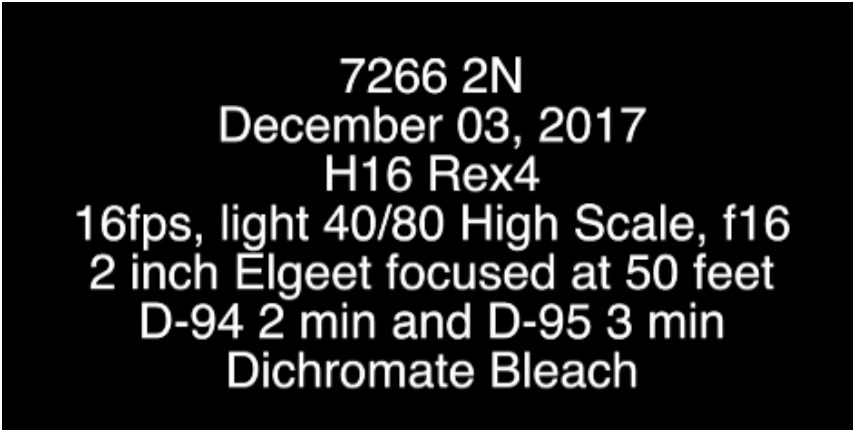
<https://youtu.be/5mM1JPbLdKI>

Dec 2, 2017 Page 383 This is the first film from the newly CLA Bolex H16 Rex4.

Here is the still movie, except for a small volunteer. Note the squirrel.

My new old H16 Rex4 was used to photograph a test today. This is the very first film shot with it. 7266 was used. The light was overcast between 40 and 80 on the high scale of the Sekonic incident meter. 200 Asa put the red line directly on f16. The book that came with the camera said the shutter speed at 16 fps is 1/40 not counting any light loss on account of the reflex prism, which at 2/5 you cannot really see anyway. The lens only has f16 so I couldn't shut it 1/3 stop more to be right on 1/40. Should be spot on. The Elgeet 2 inch f 1.5 was focused at 50 feet on the middle fence to bring more of the foreground into sharper focus. Will the image photographed match what I saw in the reflex finder? I took notes. What will D-94 do with overcast light? Scratches? Pull down blur? The camera sat flat on the railing and run lock was used to make one shot. Stable image? This lens was CLA along with the camera. Now it focuses. The diopter was set to my glasses. The baffle was closed after focusing and stopping down the lens before the exposure was made. No filter was on the lens or behind it, only an empty holder was in the slot.

Developing is now all done. Images are real strong. I like how this developer combination looks. 94&95. The D-94 was retained, however it has changed color to dark brown clear. D-95 looks like it did.



7266 2N  
December 03, 2017  
H16 Rex4  
16fps, light 40/80 High Scale, f16  
2 inch Elgeet focused at 50 feet  
D-94 2 min and D-95 3 min  
Dichromate Bleach





That is a squirrel at dead center.



## 2o 7266 interior

<https://youtu.be/RcE1khpmJmE>

Dec 2, 2017 Page 383 James at his laptop, indoors.

Left over developer was used a second time. It worked great!

D-94 turned even darker after being used twice, but D-95 stayed clear. 2 min 20 sec were given the first developer and 3 min 20 sec on the second developer. My son looks better in the film than in real life. The image is brighter by far.

Indoors with available light, about 20 foot candles incident on the low scale. The developer used left over developer that had already been used one time. 2 inch lens at f1.5.

The film strip was dropped during loading. Also, no take up spool was used. Consequently there is dirt and there are marks on the film.

A newly restored Bolex H16 Rex4 was used with 7266. CLA was done to the camera and the lens. The lens was an Elgeet 2 inch f1.5.

Home mixed D-94 was used once on another film and saved then used for a longer time on this film, 2 min and 20 seconds. The same thing goes for the second developer, which was D-95, only 3 min and 20 seconds





## 2P 7266

<https://youtu.be/--HQmk9FKeE>



Dec 8, 2017. Selfie. Me spinning and having fun.

Practice is needed to be a filmmaker. This was my effort today. A green filter was used. I understand it is good for skin tones. This is a little dark. Perhaps it is a +3 instead of a +2.

I got so dizzy that I fell into the bushes.

I wonder how many times the developers will work?

The proper replenisher formula for both 94 & 95 are in 150 DIY Formulas. 2.2 ml and .75 ml are to be added per foot of 16 mm film. I got lucky and will not repeat the experiment further. Next time I develop using these chemicals, I will replenish, and not add time, even though it worked. But, the question still remains. How many times?

A. C. said: With replenishers you shouldn't go beyond adding more than the amount of the original solution you are replenishing.

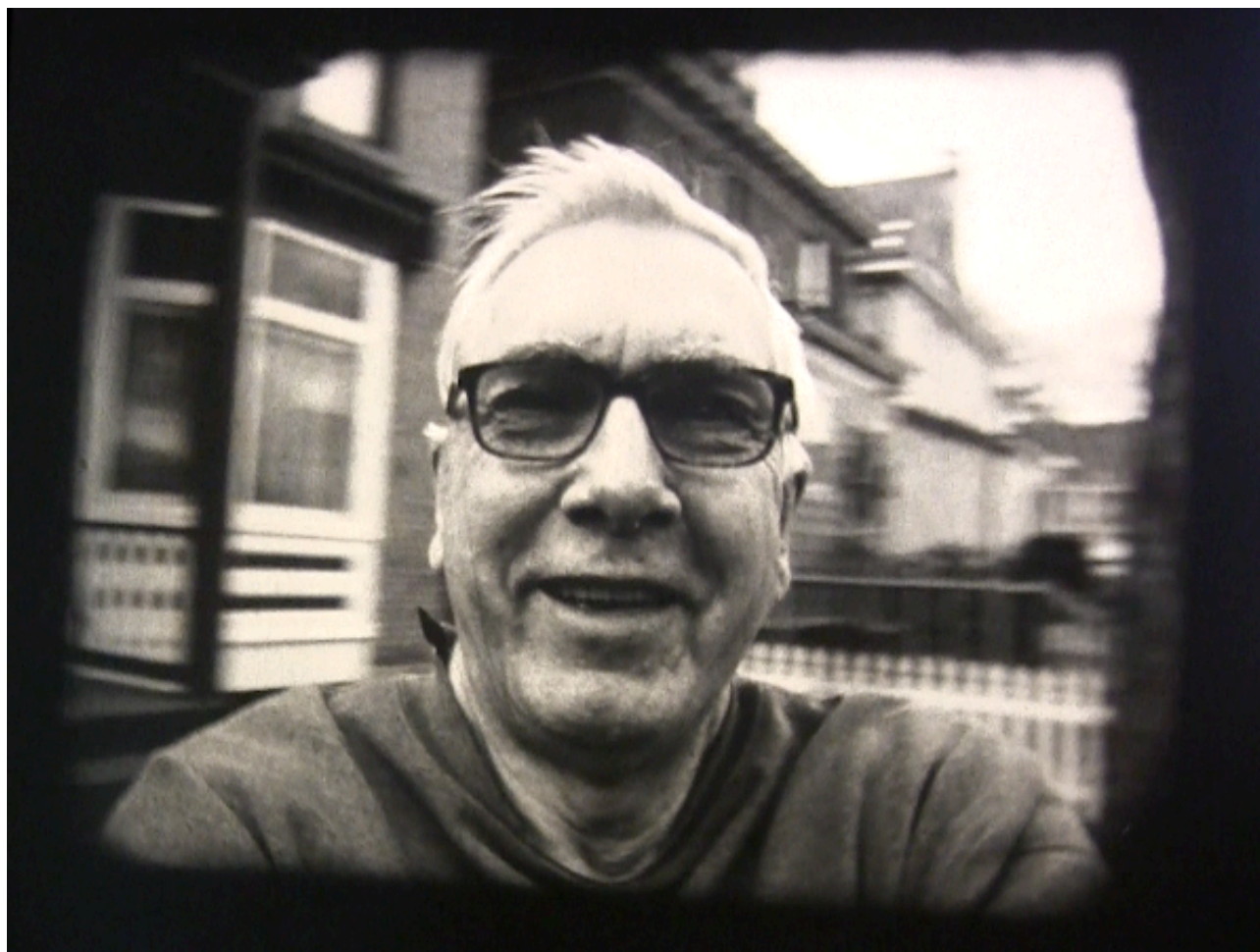
So 220ml per 100 feet of 16mm means you can do 500 feet for 1 litre of D94, for instance.

I have to prove it. The problem may be holding the total volume in one tank. The developer plus the replenisher in total must all fit in one tank. 100 feet of film plus 220 ml and the original developer... Or 50 feet of film in the bottom of the UPB 1- a tank. Lots of room in there as it would only need 110 ml at each reuse.

A. C. said: "With D-94 you can use way more than twice, I've done it, you'll easily get 300' or more out of it. The D-95 lasts even longer, If my developing tank is full and I want to reuse the developer, I would have to remove 220 ml then add the same of replenisher. That which was removed could be added back in a larger container, mixed, then 440ml removed and 220 new added? Another thing is that the Kodak instructions say the solutions keep only 3 days in an open tank. yes, but normally you put the solution in container without any air. Basically, I tried the replenisher approach with D94 but stopped because the amount of film you'd need to be developing to justify it is so large, and you'd need to develop that film before the developer expired due to time rather than use. If you're using 2 litres of first and second dev the amount of time you need to add after each 100' of 16mm is so small - 10 seconds - it doesn't make sense to me to use replenisher, there's usually around 5-10 seconds variation in my times anyway. ECN-2 I think is a bit different, it kinda makes more sense because the replenishment rate is higher - 450ml per 100'. I kept mine for over a month, and it was working fine. Kodak's recommendations will be aimed at labs, so I suspect its a similar situation to the 'use by' date on food."

**I back wound the film after loading it  
and that shortened the black leader  
to only 13 frames!**

I used replenisher later on different film. A full bottle of developer and one of replenisher were mixed. No presoaking was done. The film absorbs some of the D-94 and the replenisher refills the bottle. It worked great.



7266 2P December 8, 2017  
200 asa  
developed in D-94 two min at 68 f  
no stop bath  
dichromate bleach  
developed in D-95 three min  
then a stop bath, fix, wash

## 2Q 7266

<https://youtu.be/PFm1P-7gnRE>

December 10, 2017 Page 390 H16REX4, 16mm Yvar AR lens, No shade or filter Weston Meter 3rd floor rear view. Focus was at 30 feet to get my tree sharp. Light was 40 pointing the light meter down some. f16 ^ 11 was used. 200 ASA. Incident was 40 also.

The film was cut in half before processing. Previously used D-94 developer was used at 2 min on one half and at 8 min on the other half.

I wanted to see if film could be pushed.

Fix was reduced to 2 min

Bleach and clear were low so I diluted them and doubled the time and agitation. That worked fine.



7266 2Q Dec 10, 2017  
H16REX4, 40 High scale, 200 asa,  
f16/11, 1/40, 16mm YVAR AR,  
D-94 2 min & 8 min  
D-95 3 min







## 2R 7266

<https://youtu.be/RB3vg6daroo>

A test was shot, then I saw that a 80A filter was on the lens, oops. It is a reddish gray. Should lighten red brick. 7266 2R daylight was the same as yesterday, 40 H, the H16 rex4 was used at 16fps. The 25mm Rex Som Berthiot f1.4 lens was used. Focus was set at 30 to get my tree sharp. But I didn't open the lens any for the filter. F11 was used, half stop more than yesterday. More first development lightened the image. Used developer D-94 was used, 6 min were given. 2 min less than yesterday. Less light was exposed because of the filter. I didn't want the film to be as light or as dark as 7266 2Q. And that is what happened! Page 393.

7266 2R Dec 11, 2017  
H16 Rex 4 25mm Som Berthiot f1.4 Rex  
Light was 40 H, 1/50, 200 asa, f11  
but a filter was in by mistake, a reddish gray one.  
D-94 at 6 min, then d-95 at 3 min  
focus was set to 30 feet  
the lens had not been opened any for the filter



## 2T 7266 interior

<https://youtu.be/628uVEYmzWU>

December 12, 2017 Page 395 The last piece of roll #2. It is of a mannequin head in available light that was quite low, about 15 foot candles on the low scale using the incident Sekonic meter.

I wanted to see if it could become lighter if pushed a little bit.

H16Rex4, f1.4, 160 Asa, D-94 at 3 min, D-95 at 5 min, Previously used developers. There is no 2S.

This looks way dark. The head moves from full face to profile in a cross dissolve.



### 3A 7266

<https://youtu.be/VomvMtCtMPE>

Page 398 Dec. 13, 2017 What more do I want to test? 3rd floor interior night. The white head developed 7 minuets in old D-94 to try and make it lighter. 3 min were used to develop it last time in 7266 2T. Now try 7 or 8 min. Shorten the 2nd development back to 3 min. The normal room light is so low that a 2-3 stop push would get normal if it worked!

So, the Rex 4 was loaded without a take-up spool and back-wound to shorten the tail. Not much. 200 frames were shot plus a spurt at the end to clear the gate. 7 clicks were counted. The film was cut off and the camera was closed for the next test.



The blob of light on the right side is a reflection in the glass. Just a tiny bit of window curtain may be seen below it. This is lighter than the previous test. Previously used old D-94 developer was used 7 1/2 min

first dev, 150ml bleach, 6 agitations. All of the clip fit onto the 110 reel.

This image is a little lighter than 2T. Check the black leader and see if 30 sec less dev darkened it any or enough. Only the white movie screen can be seen in the background on the left. I can't really see the white curtains.

### 3B 7266

<https://youtu.be/gyKk9izv8a4>

Page 399 Dec. 14, 2017 Snow. 3rd fl window view left to right pan. All one exposure. A cloud went in front of the sun and made the picture darker as I shot it. Pan right. Do it over again.



The video was made in a room with some light in it. 320 high scale average, higher left, lower right. 200 Asa H16Rex4 ND 0.60 or +2 stops incident Sekonic meter. f16 infinity 25mm Som Berthiot lens 200 frames Developed 2 min in old D-94 250ml. My first snow clip. Projected: needs more light. It already was 1/3 stop open at 1/50. First develop could be longer, Asa could be lower. Old D-94 causes darker images. The Sekonic could be covered and that would lower the reading and open the lens a little bit. A gray card could be used with the Weston reflected meter. Use fresh developer.



### 3C 7266

<https://youtu.be/bR7Lf2QjLWU>

Dec 15, 2017 Page 401 Tri-X 16mm reversed with D-94 at 2 min. This developer had been used 4 other times. A N.D. 0.60 filter was used at +2 stops. light was about 320. f16, 16-11, 11, 11-8, 8. Bracketed. This would make a great table of pictures.



Try again. Darker room made this gray video image. The sun looked like 320 as bright as it gets directly behind me. Although I could not quite get it to read that on the Sekonic meter on the front porch because tree branches obscured the light and there were wispy clouds. Upstairs it looked real bright out the back window and it was constant. 25mm Som Berthiot Rex lens, H16Rex4 camera, N.D. 0.60 +2 filter, 200 frames were shot plus a squirt, just like before. Exposures were: f16, 16-11, 11, 11-8, 8. One, two, three, four, five. The shots connect to each other without any blank frames in between them. This image was shot at



f16-f11. Half way in-between the two stops. 100 Asa. Shot number two of the bracket.

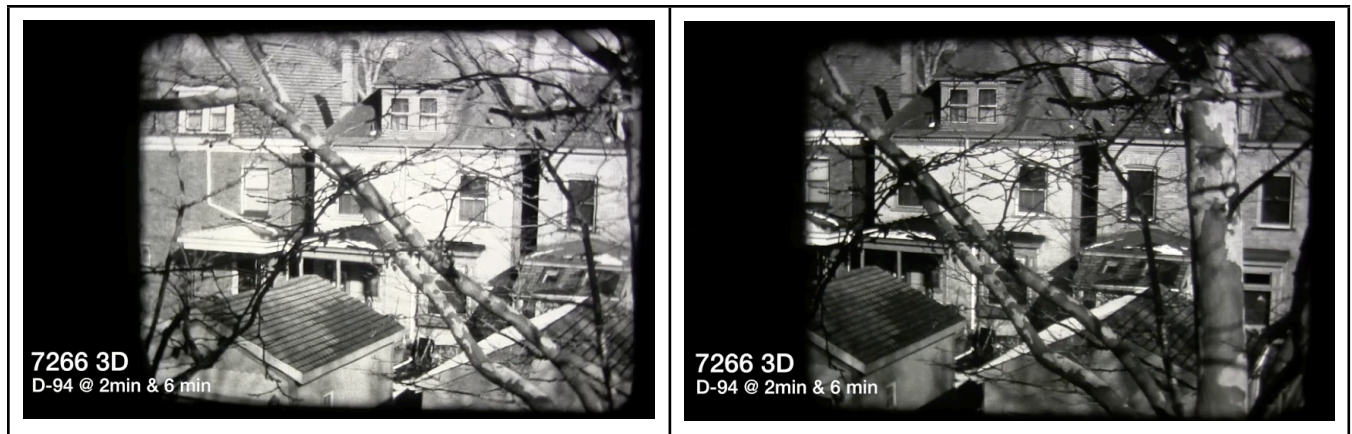


Development was 2 min first developer and 3 min second developer, I think old D-94 and D-95

### 3D 7266

<https://youtu.be/a4rAvXLxjfk> Feb 25, 2018

One exposure was made, then, the film was cut in half, each half was developed a different time. The darker one was 2 minuets, and the lighter one was 6 min. in D-94 and D-95. I used the Weston light meter from the rear window. I pointed it down of course. I got 330. f16 plus a little bit. Looks like the push process was better than my light reading. Meaning that normal development is 2 to 6 min. Try 4 minuets, right in the middle. I think just a little darker at 3 minuets is good.



Page 402 Sat. Dec 16, 2017 Bright sun was on the same scene out the 3rd fl window, but not quite as bright as yesterday. I shot 7 clicks, 207 frames, then a squirt to clear the gate making 223 frames. Dark clouds were in front of me and bright sun was behind me. The Weston meter read 300. It pointed down some. 200 Asa at 1/50 was f32+ the filter was given +2 is f16 +1/3 towards f22. I intend to push so dark is good. The film will be cut. One part is 2 min and the other part is developed 6 min. It is too difficult to process 3 reels. 8 min & 7 1/2 min were too light. Leader and edges were gray and not black. I need the two for comparisons. 2 min is the base line.

The Patterson tank soak water has a little acid in it 'cause I don't want to change the water during the remainder of developing the other roll. I put the removed reel into the soak water in the dark to stop it from developing further.

Bleach and clear were low so I diluted them and extended the time from 5 to 7 min. One film is lighter and the black is grayer than the other. The darker is very dark. 2 min still works in old D-95 and so does 3 min in D-95.

Less push time needs a try. At least I know it works. But where does it start to work? Didn't I try 4 min already? Does push always lighten black edges and leader? There must be a time that lightens all tones above black and the black stays black. It isn't 6 minuets.

This was like the second time I used the Weston light meter. It was also the first time it was used without the Sekonic, too.

Old developer may be darkening the 2 min developed image. Perhaps it should have come out lighter. 2 min is the base line or normal. It may work with better light meter technique and fresh developer.

I'm glad that more time in the first developer lightens reversal film. I think old used D-94 developer darkens it. Shoulda added time to compensate.

Try new developer and develop different times to find the correct best exposure at 200 Asa and bright sun. 30 second increments may be done. One long exposure, four pieces, four reels, one developer tank, remove one at a time in the dark and put them into stop acid soak water.

Used developer requires 10 seconds more time after each use. Replenisher may be added up to the original volume.

On page 65, in 150...by Dignan, it says: Replenishment Rate-2.2ml per foot of 16mm film. D-94-R. So, that would be 1.1ml per foot of Super 8 I think.

C. MacD. said: "55 ml for a 50 foot roll. Often you will have to adjust the rate to suit your individual setup. Normally there is a specific amount to put in the bottle after each roll and before you pour back the developer from the tank. if it will not all fit you discard some used developer. if the level goes down, you add some fresh developer to make up the difference. Check the developers data sheet for the replenishment rate recommended."



## Table of exposures Roll 1

RPN: reversal, negative, or print

New 7266 in H16 T at 16 FPS  $\frac{1}{40}$

Name	Page	Light	Filter	fstop	Dev.	Dil.	Time	Temp.	RNP		
1A	255	320-1	Red	5.6	R09	1:25	18	75	R	+3	
1B	260	320	Red	5.6	R09	1:100	60/60	76	R	STAND	STAND
1C	263	320	Red	8.5.6	R09	1:25	22	68	R	+3	
1D	265	320	Red	4.5.6	R09	1:25	30	68	R	+3	
1E	267	320+	Red	5.6 16	R09	1:100	60	77	R	+3	STAND
1F	270	320	Red	5.6	R09	1:100	120	76	R	+2.5	STAND
1G	275	320-1	Red	5.6	R09	1:100	60	78	R	+2.5	STAND
1H	276	320-	Red	5.6 $\frac{1}{4}$	R09	1:100	60	78	R	+2.5	STAND
1I	279	320	Red	4.5.25	R09	1:25	22	68	R		Copy 1C 105%
1J	280	320-	Red		R09	1:100	40	80	R		
1J	280	320-	Red	4.5.6	Paranol	1:25	22	68	R		
1K	284	320+	Red	5.6	Paranol	1:25	22	68	R		DONE TOGETHER
1L	284	320+	Red	8.5.6	Paranol	1:25	22	68	R		
1M	285	320	Red	4	Paranol	1:25	22	68	R		
1N			chewed up in camera								CONFUSED
1O	286	320+	Red	5.6 $\frac{1}{4}$	Paranol	1:25	22	68	R	DARK	FLASHED
1P	271	320-1	Red?	20.950 $\frac{56}{4}$	R09	1:100	more agitation	73°		STAND + 2.5	
old 7266 was used in stand developing next then 7222 was used											
1B	260	320	Red	5.6	R09	1:100	60 min	76	+3	25	
1E	267	320+	Red	5.6/16	R09	1:100	60	77	+3		dark
1F	270	320	Red	5.6	R09	1:100	120	76	+2.5	20	
1G	275	320-1	Red	5.6	R09	1:100	60	78	+2.5	25	
1H	276	320-	Red	5.6 $\frac{1}{3}$	R09	1:100	60	78	+2.5	25	
1P	271	320-1	Red	5.6/4	R09	1:100	60 + agitation	73°	+2.5	25	
SYMBOL											
STAND	303	320+	Red	4- $\frac{1}{3}$	R09	1:100	60	70	+2.5	12 ASA	



## Table of Exposures of Roll 2

	Name	Page	Light	Filter	fstop	Dev	Dil	Time	Temp	FILTED INCREASE	Fix	2nd	STOP
(H16T)	2A	347	80/160	O <sub>2</sub>	F 16/11	D-19	1:0	7min	70	+2	4	4	NONE Revised 1st
	2B	350	160+	O <sub>2</sub>	16+1/3	D-19	1:0	7	70	+2		4	
	2C	351	40/80	—	11	D-19	1:0	7	70	—	4	FRESH used 4	
	2D	352	40 H	—	11+1/3	D-19	1:0	7	74	—		used 4	
	2E	353	40 H	—	11 1/3	D-19	1:0	10	70	—	4	used 4	
	2F	359	320	O <sub>2</sub>	22 2/3	D-19	1:0	7	70	+2		4 used	NO
	2G	361	40 H	—	11+1/3	D-19	1:0	4.7 30 min	70	—			NO
Pushed	2H	362	640 L	—	11	D-19	1:0	20	70				640 LOW
Pushed	2I	364-6	640 L	—	11	D-19	1:0	30	72 avg	—			
int	2J	377	20 L	—	1.5	LQR	1:10	20	75		3		
int	2K	378	20 L	—	1.5	LQR	1:10	30	78				
	2L	380	160 H	O <sub>2</sub>	11/16	D-94	1:0	2	68	+2	3	95	
int	2M	382	20	—	1.5	D-94	1:0	2	68	—	3	95/3	
(H16REX)	2N	383	40/80 H	—	16	D-94	1:0	2				95/3	1/50
INT	2O	383	20	—	1.5	D-94	1:0	2:20				3:20	1/50
	2P	389	40 H	Green	8/56	94	1:0	2		+2	2	3	NO STOP
Weston	2Q	390	40	—	11-16	94	1:0	2 & 8	68	—	2	3	PUSH
	2R	393	40	COPS PINK	11	94	1:0	6				3	PUSH
INT	2S	396	15 L	—	1.4	94	1:0	3				5	used dev
INT	2T				1.4								



# Table of exposures in D-94

171221 ~~2017~~ ~~171221~~ D-94 TABLE

2017 7266 LIGHT CAM USA PROBER

D-94 new-old-used ~~at~~ amount time temp

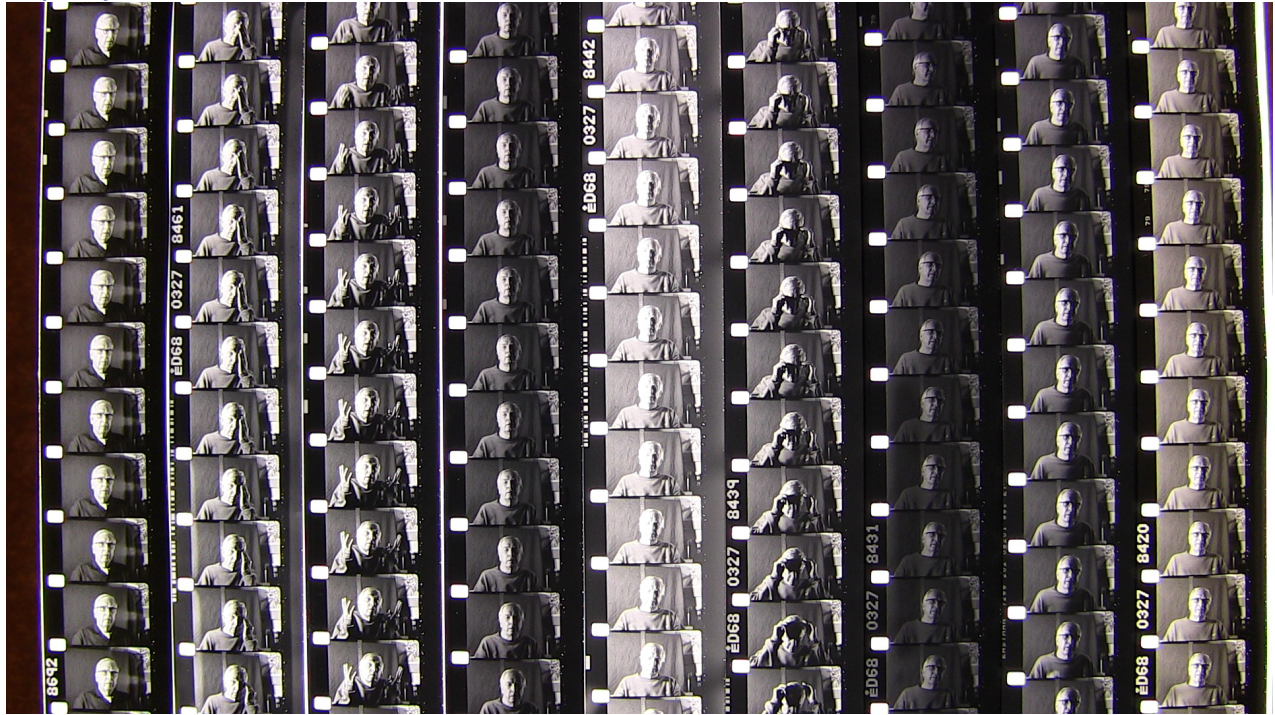
2017 DATE	FILM	MIX	TIME	TEMP.	S/W	2 TIME	S/W	AMOUNT
11-28	22	NEW	2	68	STOP	3	W	166 ml
11-30	2M	NEW	2	68	STOP	3	W	166 ml
12-02	2N	NEW	2	68	STOP	3	W	166 SAVED
12-02	2O	OLD-1	2:20	68	STOP	3:20	W	166 SAVED
12-08	2P	<del>OLD-1</del> NEW	2	68	WATER	3	STOP	250 ml
12-10	2Q	OLD-1	2	68	Water	3	STOP	250 ml
12-10	2Q	OLD-1	8	68	Water	3	STOP	250 ml
12-11	2R	OLD-2	6	68	Water	3	STOP	250 ml
12-12	2S	OLD-3	3	68	Water	4	STOP	250 ml
12-12	2T	" NEW	"	"	"	"	"	"
12-13	3A	OLD-1	7 1/2	68	Water	3mm	STOP	250 ml
12-14	3B	OLD-2	2	68	W	3	S	250
12-15	3C	OLD-3	2	68	W	3	S	250
12-16	3D	OLD-4	2	68	W	3	S	250
12-16	3D <sub>2</sub>	OLD-5	6	68	W	3	S	250

I don't know when I started using the second 250 ml bottle of D-94. Note do not say exactly when that bottle was used the first time. Keep better records next time. Not 2R, 2R added fresh doing 2T Page 896 Must be 2T. Leftovers topped off the fresh bottle. OK



## 7B 9 films interiors

<https://youtu.be/zDCz6vmC-Hw>



On the left is the film called Poem which is 100 feet or so long on a spool and in a box. It looks good projected. Roll #7.

Next to it is the end of a long film also. All the pieces of film on the light table are from one exposure of me in the chair but without sound, like the one the left has. No sound was recorded during exposure of the film cut into 8 pieces. The start of the film is on the right. The end of the film is on the left. I started at the end, developing 3 feet or so at a time, using different techniques and developers. Film was on the take up spool in the camera with the end facing out. I pulled a piece of film off the take up spool as long as my right arm would extend, cut it, then loaded it onto a Jobo 110 reel. Remaining film was returned into the camera.

They will eventually be all spliced together in the correct order and projected. Then a video can be made as the film projects. The one on the left will not be included.

The one on the right is brown. I wonder if the clear is going bad? It has been used over and over again. The color could be from the bleach. I will try putting it back into clear again to correct it.

**Tail 1.** The film was backwards as it came off the take up spool. Second from the left. It was processed March 30, 2018 in D-94, 1:0, 2 min at 68 degrees F, and D-95, 1:0, 3 min at 68 F. Page 515 in my notebook. Agitation was 15 times in 30 seconds to start then 3 times each 30 seconds. No pre rinse. An acid stop bath was used 1 min.

**Tail 2.** April 1st. D-94, 1:0, 2 min, 68 F, Then D-95 1:0 3 min 68, but agitation was less, 3 times to begin then 1 time every 30 seconds. Pre rinsed 2 min. Stop bath 1 min. Page 517-8.

**Tail 3.** 1:5, D-94, 50ml in 250ml, 8 minuets, 15 X in 30' then 3 X at 30'. D-95 1:0 at 3 min.

**Tail 4.** RO9, 1:100, 90 min. 2nd dev. D-95 68F 4 min. Agitation 15 X in 30' then same at 30 and 60 min. April 3, Page 520.

**Tail 5.** RO9, 3.5ml up to 300ml, 1+:100, 76 degrees F, done like #1P. Pre soak with agitation 1 min. 1st developer was One hour long. Agitation to start was 15 X in 30 seconds, then 6 X at 15 min, and 6 X at 30 min, and 6 X at 45 min. 2nd developer was D-95 4 min 67 degrees F. Fix 3 min. Did grain get smooth? Is the light side of my face darker? April 4, Page 521

**Tail 6.** HC-110, 1:100, 68 F, Pre soak, Darken the light side of my face. This film is the darkest one. Agitation was 4 X to start then 1 X at 30 min. Fix 3 min.

**Tail 7.** Dektol. 1:3 as 50ml in 150ml. 75 degrees F. 8 min. Agitation was 15 & 3. Water stop wash. The first developer was dumped out. The second developer was mixed the same way fresh 8 min at 76 degrees. April 6, Page 525

**Tail 8.** HC-110, 84 degrees F, 38 X in 60', 75 min, One hour fifteen minuets. 30 X at 30 min. 30X at 60 min. Second developer was HC-110 again 1:100, more agitation was given at the 45 min mark 10 in 15, 40X at 60 min. because of thin leader, 75 min 10X given, 90 min second developer. Fix 4 min at 70 degrees. Page 525-528. April 7, 2018. Clear was weak and didn't do the job. I had to do it over again to make the film strip gray like the others. This is the first clip when the film all spliced together is projected in proper order.





7B 8 clips April 9, 20218 The picture was flipped side to side and the strip from the previous movie was removed. Now the images above play as does the film in the link. There is information about each clip on the screen in the video. Tail 8 is the strip on the left; Tail 1 is the strip on the right.

One long shot was made like I did the Poem only without recording any sound. I turned the aperture setting the wrong way and over exposed it. The film was cut into 8 pieces and each was developed differently.





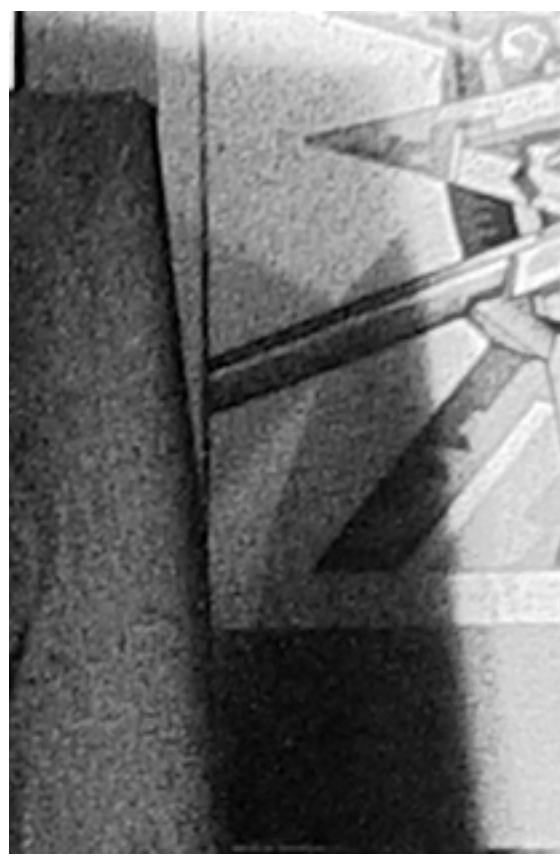
1 & 2



3 & 4



5 & 6



7 & 8